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**VARIATION IN THE FEMALE FRENULUM IN TORTRICIDAE
(LEPIDOPTERA). PART 3. TORTRICINAE**

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Abstract.—This paper, treating the subfamily Tortricinae, represents the third and final contribution in the three-part series examining variation in the number of bristles in the female frenulum of tortricid moths. Based on the examination of 3,850 females of 1,082 species from 267 genera, the number of bristles in females varies from one to eight and frequently is asymmetrical on the same specimen (19% of specimens examined). A three-bristled frenulum (i.e., with three bristles on each side) is the most common condition in the *Arotropora* Meyrick group (100% of females examined), Epitymbiini (96%), *Orthocomotis* Dognin group (92%), *Mictopsichia* Hübner group (88%), Atteriini (83%), Tortricini (82%), Sparganothini (78%), Phricanthini (73%), Euliini (71%), Archipini (62%), Cnephasiini (61%), and Schoenotenini (51%). In Cochylini a two-bristled frenulum is the most common condition (i.e., 59% of all females examined). In Ceracini a four-bristled frenulum is the most common condition (i.e., 37%), with the vast majority of individuals possessing four or more bristles on at least one side; only 4% had three bristles (both sides). Although variation is rampant at the species, generic, and tribal levels, the data suggest a strong tendency for the reduction of bristles in Cochylini, where two (both sides) is the dominant condition; the addition of bristles in Ceracini, where four bristles is the most common condition; and more bristles in the largest species (e.g., *Choristoneura conflictana* (Walker), *Zacorisca electrina* (Meyrick), and *Varifula* sp.).

Key Words: Archipini, *Arotrophora* group, asymmetry, Atteriini, bristles, Ceracini, Cochylini, Cnephasiini, Epitymbiini, Euliini, *Mictopsichia* group, *Orthocomotis* group, Schoenotenini, Sparganothini, Tortricini, variation

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In the majority of ditrysian Lepidoptera, wing coupling is accomplished by a frenulum (a bristle or group of bristles) that originates near the base of the hind wing and a retinaculum (a cuticular flap or group of modified scales) situated near the base of the costa or subcosta on the undersurface of the forewing into which the frenulum extends. It is assumed that this wing coupling mechanism is critical for joining the fore- and hind wing for flight, but this assumption has yet to be tested rigorously. In one of few studies focused on the morphology of these structures, Braun (1924) examined variation among families of North American Lepidoptera. Although she reported gross differences among different types of wing coupling (e.g., jugate, frenate, etc.), no details were provided on variation within families or superfamilies.

Variation in the number of bristles in the female frenulum is now known to be a common phenomenon in many families of Lepidoptera (e.g., Acrolophidae, Cossidae) (D. Davis pers. comm., P. Gentili-Poole pers. comm.), but it is seldom discussed or quantified in the literature. In Tortricidae, the number of bristles in the female frenulum was examined by Komai (1999) in Grapholitini (Olethreutinae). In this and related studies (i.e., Brown and Baixeras 2006, Brown 2006), a three-bristled frenulum was assumed to represent the groundplan, with a two-bristled frenulum hypothesized to represent a synapomorphy for various clades. Because variation in this feature had not been examined over a broad phylogenetic range of Tortricidae, Yang and Brown (2009) began a study to quantify its variation and evaluate its phylogenetic significance, starting with the subfamily Chlidanotinae. They concluded that the number of bristles in the female frenulum is phylogenetically informative in this

subfamily, providing an additional synapomorphy in support of the putative sister relationship between Chlidanotini and Hilarographini. Rota et al. (2009) conducted a similar survey of Olethreutinae and concluded that variation in the number of bristles in the frenulum is not informative at higher levels (e.g., tribes, subtribes) in this subfamily, owing to the high degree of intrageneric and intraspecific variation. However, the number of bristles may be of phylogenetic significance at the generic level, particularly in Eucosmini and Grapholitini, where some groups show a high degree of consistency to either a two- or three-bristled condition. This paper represents the final contribution in the series, examining the distribution and phylogenetic significance of variation in the female frenulum in Tortricinae.

Tortricinae is comprised of about a dozen tribes (Phricanthini, Tortricini, Cochylini, Cnephasiini, Euliini, Schoenotenini, Archipini, Ramapesiini, Ceracini, Epitymbiini, Sparganothini, and Atteriini), varying with taxonomic opinion, plus three “orphan” groups that do not fit convincingly into any of the tribes as currently defined (i.e., *Mictopsichia* Hübner group, *Orthocomotis* Dognin group, and *Arotrophora* Meyrick group). The subfamily includes approximately 4,500 described species and 445 genera (Brown 2005). Archipini, Tortricini, and Cochylini are represented in every major biogeographic realm, whereas the other tribes exhibit a much more restricted geographic distribution.

MATERIALS AND METHODS

Methods used in this study are essentially the same as those described by Yang and Brown (2009) and Rota et al. (2009) and can be summarized as follows. Pinned adult moths were examined

at 30–40 \times under a dissecting microscope following the determination of its sex by the examination of the intact genitalia or the presence/absence of conspicuous male secondary features. To have a clearer view of the bristles, occasionally a few wing scales were removed using a #2 insect pin and the forewing then slightly pushed upwards to expose the frenulum. In some cases, light pressure was applied to the base of the frenulum to separate the bristles to facilitate counting; the number recorded was that of free bristle tips. Not all specimens were scored because in some it was impossible to count bristles because the individual was unspread or damaged. One male was scored owing to the highly consistent number of bristles ($n = 1$), along with five females of each species, where available. Many species were represented by fewer individuals.

Reference to a “two-bristled frenulum” or “three-bristled frenulum” implies symmetry between the wings; asymmetrical individuals are noted as “two- and three-bristled” or “2&3.” Material used in this study is deposited in the National Museum of Natural History, Smithsonian Institution, Washington, D.C. In addition to the material listed in the appendix, we examined 354 additional species represented by males only. For statistical purposes, only females are used; for calculating intraspecific variation, only species represented by two or more females are included. Whereas Rota et al. (2009) evaluated the number of species in each tribe for each condition (i.e., configuration/number of bristles), in this paper we report our findings as the number of specimens with each condition.

Assignment of species to genera and genera to tribes essentially follows Brown (2005). Within tribes, genera and species are presented in alphabetical order. We recognize the following tribes: Phrican-

thini, Tortricini, Cochylini, Cnephasiini, Euliini, Schoenotenini, Archipini, Cera-cini, Epitymbiini, Sparganothini, and Atteriini; we follow Horak (1998), Brown (2005), and others treating Ramapesiini as subordinate within Archipini. Consistent with Brown (2005), we also recognize three monophyletic groups of two or more genera that do not fit convincingly into any tribe, and these are referred to as the *Arotrophora* group (“New Tribe 1” of Brown 2005), *Orthocomotis* group (“New Tribe 2” of Brown 2005), and *Mictopsicha* group (“New Tribe 3” of Brown 2005).

RESULTS AND DISCUSSION

General.—We examined 3,850 females representing 1,082 species and 267 genera (Appendix 1). The number of bristles in the male frenulum is consistently one, although there was one exception (i.e., *Dichelopa myopori* Clarke) in which one side had one strong bristle and a second smaller vestigial bristle. The number of bristles in the female frenulum varies from one to eight; frequently it is asymmetrical on the same specimen (19% of the individuals examined) and/or polymorphic within a species (52% of the species examined) (Fig. 1). We found the following 16 combinations (number of specimens exhibiting the combination in parentheses): 1&2 bristles ($n = 24$), 1&3 ($n = 8$), 1&4 ($n = 1$), 2 ($n = 618$), 2&3 ($n = 399$), 2&4 ($n = 6$), 2&5 ($n = 1$), 3 ($n = 2,389$), 3&4 ($n = 279$), 3&5 ($n = 3$), 3&6 ($n = 1$), 4 ($n = 110$), 4&5 ($n = 5$), 5 ($n = 3$), 5&6 ($n = 1$), and 6&8 ($n = 2$) (Fig. 1). Overall, 63% of the individuals examined had a three-bristled frenulum and 16% had a two-bristled one. At the species level, 41% ($n = 449$) of the species had exclusively a three-bristled frenulum and 12% ($n = 130$) exclusively a two-bristled one, but we examined only one female for 166 and

28 of these species, respectively. A three-bristled frenulum was found in 100% of *Arotrophora* group females examined, 96% of *Epitymbiini* females, 92% of *Orthocomotis* group females, 88% of *Mictopsichia* group females, 83% of *Atteriini* females, 82% of *Tortricini* females, 78% of *Sparganothini* females, 73% of *Phricanthini* females, 71% of *Euliini* females, 62% of *Archipini* females, 61% of *Cnephasiini* females, and 51% of *Schoenotenini* females. A two-bristle frenulum was found to be the most common state in *Cochylini* (i.e., 59% of females); a four-bristled frenulum was the most common state in *Ceracini* (i.e., 37% of females). Although variation is considerable at the species, generic, and tribal levels, the data suggest a strong tendency for the reduction in number of bristles in *Cochylini*, where two (both sides) is the dominant condition, and the addition of bristles in *Ceracini*, where four bristles is the most common condition.

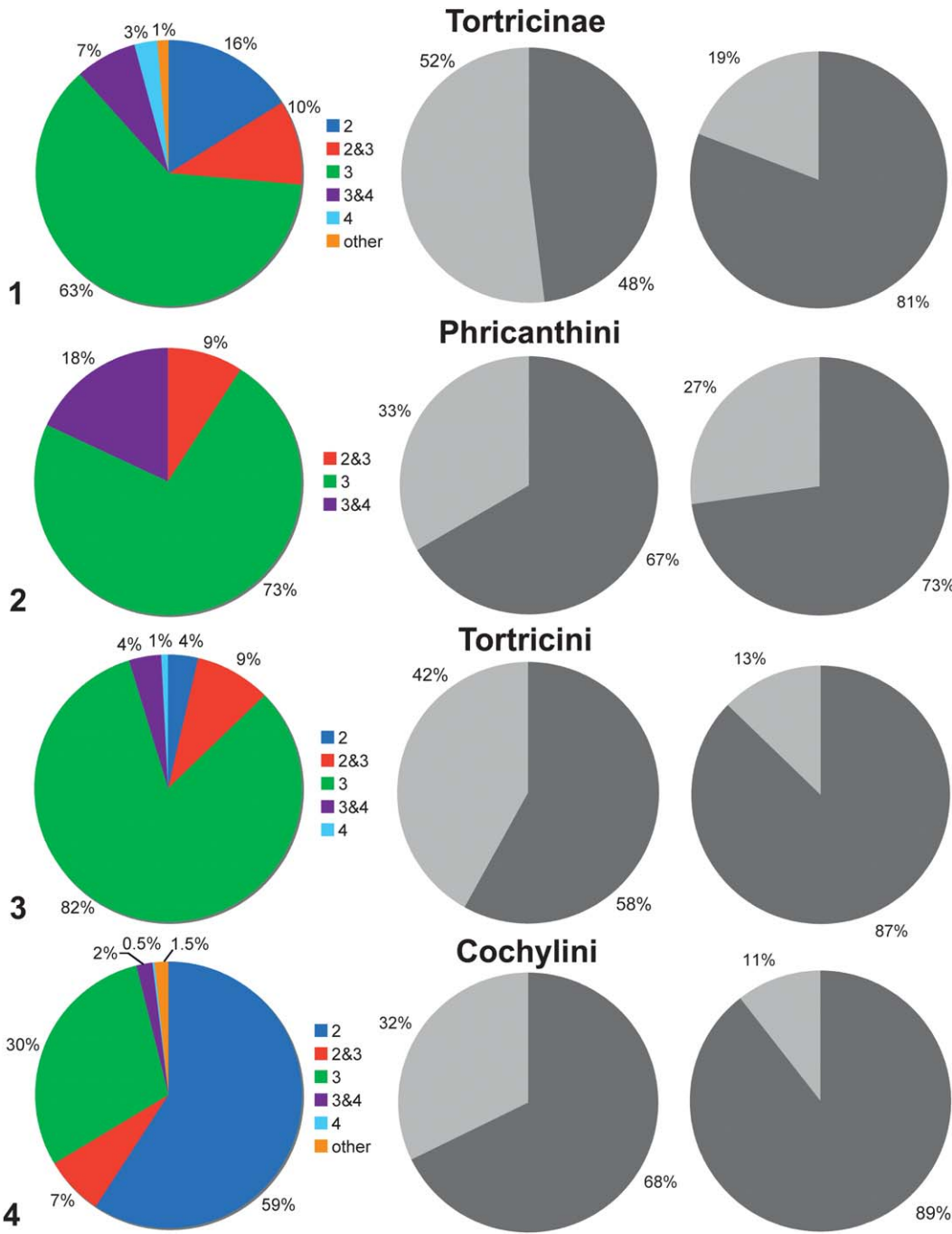
Because adults of *Ceracini* are the largest tortricids, one may speculate that the large number of bristles is correlated with size. While some of the largest *Archipini* (e.g., *Choristoneura conflictana* (Walker)), *Euliini* (e.g., *Varifula* sp.), and *Cochylini* (e.g., "*Phalonia*" *grandis* Busck) have 3&4 or 4&4 bristles, providing some support for this hypothesis, other large females, such as *Amorbia* species (*Sparganothini*) and *Tinacrusis* species (*Atteriini*), typically have a three-bristled frenulum. Hence, the large number of bristles in *Ceracini* may be phylogenetically informative. Below we provide a detailed discussion of each tribe.

Phricanthini: On the basis of morphological and biological features, *Phricanthini* is considered the most ancestral tortricine group (Diakonoff 1981, Kuznetsov and Stekolnikov 1994, Horak 1998). It is a small tribe, consisting of about 21

described species assigned to three genera, distributed primarily in the Indo-Australian Region. One species, *Phricanthes flexilineana* (Walker), was inadvertently introduced into Africa and Central and South America (Brown 2007). We examined 11 females representing four species and two genera. A three-bristled frenulum was the most common condition (Fig. 2), observed in 73% of the females examined; 50% of the species (2 of 4) had exclusively a three-bristled frenulum. In 73% of the females examined, the bristles were symmetrical from side to side, and 33% of the species showed intraspecific variation.

Tortricini: *Tortricini* is comprised of about 400 described species in 41 genera. They are most species-rich in the Holarctic Region. We examined 651 females representing 157 species in 15 genera. Females of this tribe displayed the following combinations: 2 bristles ($n = 24$), 2&3 ($n = 59$), 3 ($n = 538$), 3&4 ($n = 24$), and 4 ($n = 6$) (Fig. 3). The most common condition in the tribe was a three-bristled frenulum (82% of individuals examined); 57% ($n = 90$) of the species had exclusively three bristles, but we examined only one female for 10 of those species. In 87% of the females examined, the bristles were symmetrical; 42% of the species exhibited intraspecific variation.

Cochylini: *Cochylini* is the second largest tribe in Tortricinae with about 1,000 described species in 75 genera. Although present in every major biogeographic realm, they are most species-rich in the Neotropics. We examined 828 females representing 214 species in 38 genera. The following combinations were found: 1&2 bristles ($n = 11$), 2 ($n = 490$), 2&3 ($n = 59$), 3 ($n = 247$), 3&4 ($n = 15$), 4 ($n = 4$), and 4&5 ($n = 2$) (Fig. 4). A two-bristled frenulum was the most



Figs. 1–4. Pie charts showing percentages of specimens with different bristle-number combinations (left), percentage of species with intraspecific variation (middle, dark = species without variation), and percentages of specimens with symmetrical and asymmetrical number of bristles (right, dark = specimens with symmetry). 1, Tortricinae; 2, Phricanthini; 3, Tortricini; 4, Cochylini.

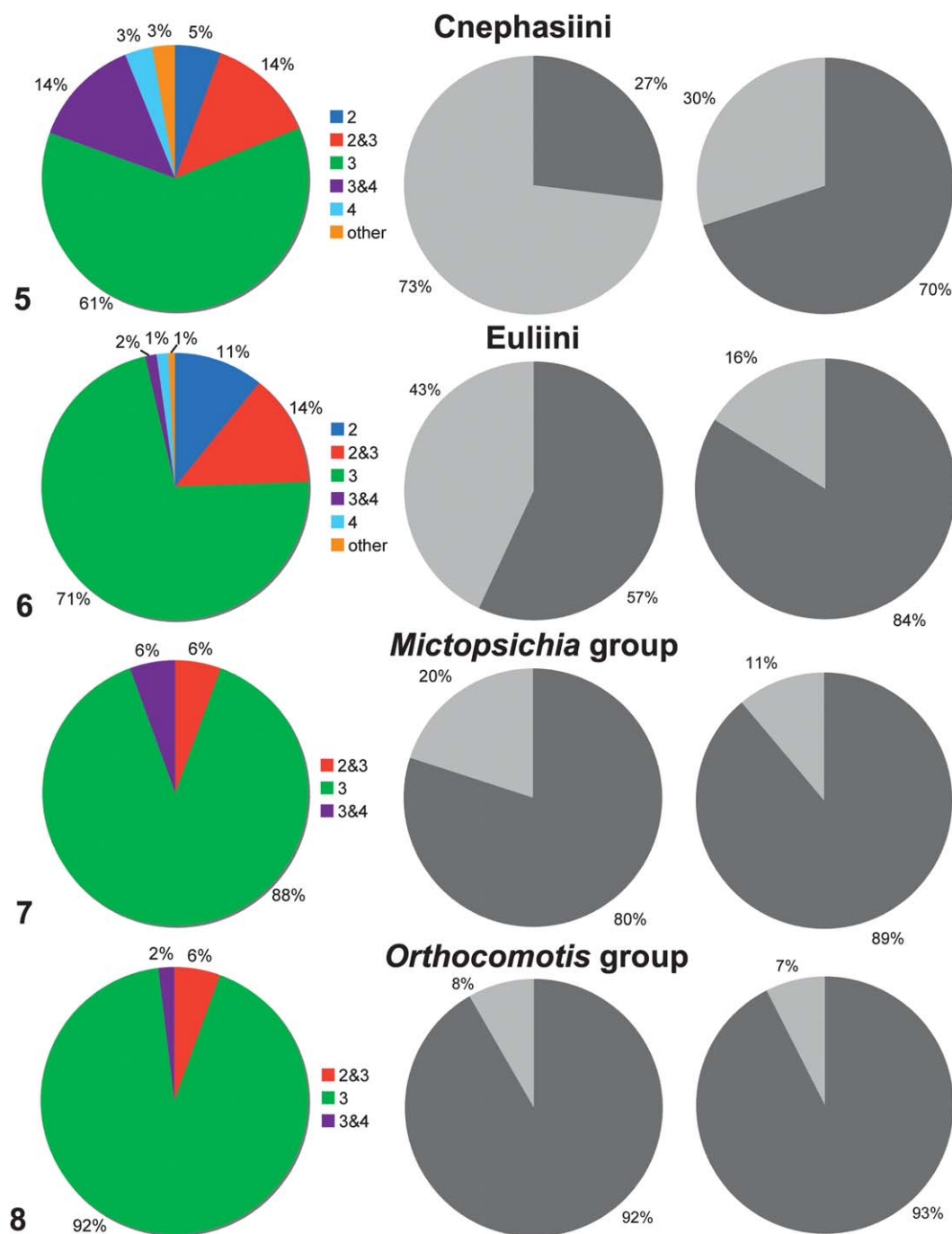
common condition, observed in 59% of individuals examined; 52% ($n = 112$) of the species had an exclusively two-bristled frenulum, but for 15 of these species we examined only one female; a three-bristled frenulum was observed in 30% of the females examined. In 89% of the females examined, the bristles were symmetrical from side to side; 32% of the species exhibited intraspecific variation. Cochylini are unique within Tortricinae in that the two-bristled frenulum was the dominant condition. In contrast to this pattern, the females of nearly all *Phtheochroa* Stephens and *Henricus* Busck, the putative least derived genera, had three bristles. Three other cochyline genera (i.e., *Lorita* Busck, *Cochylimorpha* Razowski, and *Platphalonia* Razowski) also showed a tendency to have a three-bristled frenulum; females of "*Phalonia*" *grandis* Busck (a species that belongs to an undescribed genus), had a four- or four- and five-bristled frenulum.

Cnephasiini: Cnephasiini includes about 260 described species in 19 genera. As defined by Razowski (1965), the tribe appears to be restricted to the Holarctic. We examined 184 females representing 45 species in 11 genera. The following combinations were found: 2 bristles ($n = 10$), 2&3 ($n = 25$), 3 ($n = 113$), 3&4 ($n = 25$), 4 ($n = 6$), and other configurations ($n = 5$) (Fig. 5). A three-bristled frenulum was the most common condition in the tribe, observed in 61% of the females; 27% ($n = 12$) of the species had exclusively a three-bristled frenulum, but for two of these species we examined only one female. In 70% of the females examined, the bristles were symmetrical from side to side, and 73% of the species showed intraspecific variation. The females of *Exapate congelatella* (Clerck) have only vestigial wings, and not even a rudimentary frenulum could be found.

Euliini: Euliini includes about 850 described species in 150 genera mainly restricted to the Neotropics, with one Holarctic genus and species (i.e., *Eulia ministrana* L.). We examined 374 females representing 132 species in 55 genera. The following combinations were found: 2 bristles ($n = 40$), 2&3 ($n = 51$), 3 ($n = 269$), 3&4 ($n = 6$), 4 ($n = 5$), and other configurations ($n = 3$). A three-bristled frenulum was the most common condition (Fig. 6), observed in 71% of the females examined; 58% ($n = 77$) of the species had exclusively this condition, but for 35 of these species we examined only one female. In 84% of the individuals examined, the bristles were symmetrical from side to side, and 43% of the species showed intraspecific variation. There was a slight tendency for smaller species to have a two-bristled frenulum and larger species to have more than three (e.g., *Varifula* sp.).

Mictopsichia group: This unusual group of small, "telochromatic" species includes four genera and about 30 species; the New World members were recently reviewed by Razowski (2009). The group has been placed in Hilarographini (Chlidanotinae), Archipini (Tortricinae), and Euliini (Tortricinae) and was treated as "New Tribe 3" by Brown (2005). We examined six species in three genera. The following combinations were found: 2&3 bristles ($n = 1$), 3 ($n = 16$), and 3&4 ($n = 1$). The most common condition was a three-bristled frenulum (Fig. 7), observed in 88% of the individuals examined; 67% of the species (4 of 6) had exclusively this combination. In 89% of the individuals the bristles were symmetrical from side to side, and 20% of the species showed intraspecific variation.

Orthocomotis group: This group includes about 58 described species in two genera restricted to the Neotropics. The two genera have been placed in Polyorthini (Chlidanotinae), Euliini



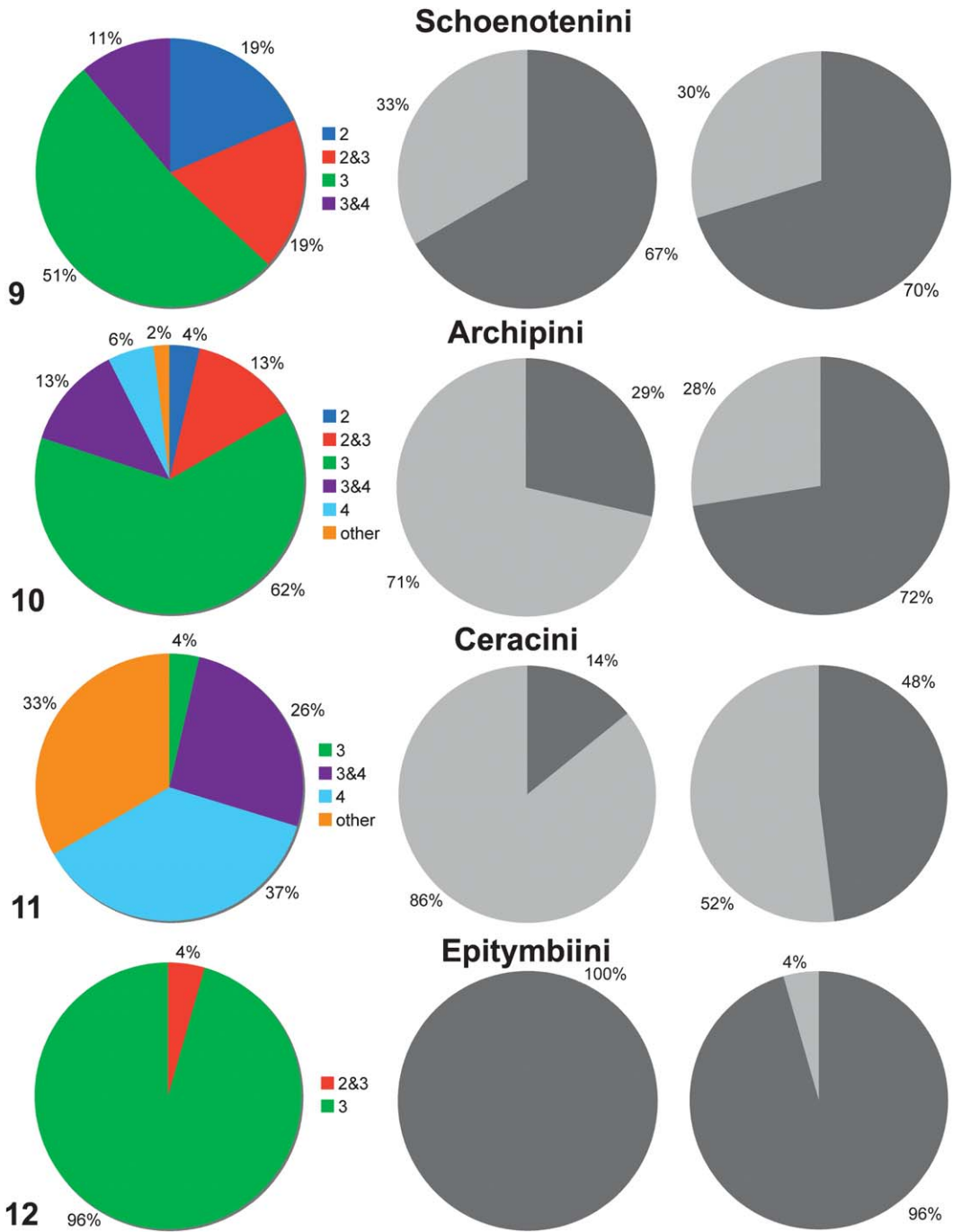
Figs. 5–8. Pie charts showing percentages of specimens with different bristle-number combinations (left), percentage of species with intraspecific variation (middle, dark = species without variation), and percentages of specimens with symmetrical and asymmetrical number of bristles (right, dark = specimens with symmetry). 5, Cnephasiini; 6, Euliini; 7, *Mictopsichia* group; 8, *Orthocomotis* group.

(Tortricinae), and Schoenotenini (Tortricinae); they were treated as "New Tribe 2" by Brown (2005). We examined 54 females representing 16 species in two genera. The following combinations were found: 2&3 bristles ($n = 3$), 3 ($n = 50$), and 3&4 ($n = 1$). The most common condition was a three-bristled frenulum (Fig. 8), observed in 92% of the individuals examined; 81% ($n = 13$) of the species had exclusively this combination, but for four of these species we sampled only one female. In 93% of the individuals the bristles were symmetrical from side to side, and only 8% of the species showed intraspecific variation. In this tribe the three-bristled condition was more consistent than in any other tribe examined (except for those biased by small sample size, i.e., *Arotrophora* group and Schoenotenini). However, because of the extremely narrow taxonomic and morphological definition of this tribe (i.e., only two genera, one of which is monotypic), one might expect a higher degree of homogeneity.

Schoenotenini: This tribe includes about 210 described species in 37 genera restricted to the Indo-Australian Region. We examined 27 females representing 16 species in 11 genera. The following combinations were found: 2 bristles ($n = 5$), 2&3 ($n = 5$), 3 ($n = 14$), and 3&4 ($n = 3$). A three-bristled frenulum was the most common condition (Fig. 9), observed in 51% of the females examined; 31% ($n = 5$) of the species had exclusively a three-bristled frenulum, but for three of these species we examined only one female. In 70% of the females examined, the bristles were symmetrical from side to side, and 33% of the species showed intraspecific variation. As with the *Arotrophora* group, the statistics on this tribe are strongly biased by the small sample size—37% of the species examined were represented by single females.

Archipini: This is the most species-rich tribe in Tortricinae with approximately 1,600 described species in 160 genera. The tribe occurs worldwide, with its greatest species richness in the Indo-Australian Region (i.e., 7% of the species are Nearctic in origin, 10% Neotropical, 11% Oceanic, 14% Afrotropical, 16% Oriental, 17% Palearctic, and 26% Indo-Australian). We examined 1,243 females representing 355 species in 89 genera. The following combinations were found: 2 bristles ($n = 44$), 2&3 ($n = 162$), 3 ($n = 787$), 3&4 ($n = 157$), 4 ($n = 69$), and others ($n = 24$). A three-bristled frenulum was the most common condition (Fig. 10), observed in 63% of the females examined; 36% ($n = 127$) of the species had exclusively a three-bristled frenulum, but for 59 of those species we examined only one female. In 72% of the females examined, the bristles were symmetrical from side to side, and 71% of the species showed intraspecific variation.

Ceracini: This tribe of large, brightly colored, diurnal species includes about 28 described species in four genera restricted almost exclusively to the Oriental Region. We examined 27 females representing eight species in three genera. The following combinations were found: 3 bristles ($n = 1$), 3&4 ($n = 7$), 4 ($n = 10$), and others ($n = 9$) all of which exceed 3&4. A four-bristled frenulum was the most common condition (Fig. 11), observed in 37% of the females examined; no species had exclusively a four-bristled frenulum. In 48% of the females examined, the bristles were symmetrical from side to side, and 14% of the species showed intraspecific variation. Females of this tribe consistently had a greater number of bristles than those of any other tribe. The maximum number was 6&8 observed in two females. No females had two- or two- and three-bristled frenulum,



Figs. 9–12. Pie charts showing percentages of specimens with different bristle-number combinations (left), percentage of species with intraspecific variation (middle, dark = species without variation), and percentages of specimens with symmetrical and asymmetrical number of bristles (right, dark = specimens with symmetry). 9, Schoenotenini; 10, Archipini; 11, Ceracini; 12, Epitymbiini.

and only one had a three-bristled frenulum. This tribe also showed the highest percentage of asymmetry at 52%.

Epitymbiini: Epitymbiini includes about 124 described species in 18 genera, with many species unassigned to contemporary genera (Horak et al. 1996). The group is restricted to the Indo-Australian Region. We examined 23 females representing 11 species in 10 genera. The following combinations were found: 2 bristles ($n = 1$) and 3 bristles ($n = 22$). A three-bristled frenulum was the most common condition (Fig. 12), observed in 96% of the individuals; 90% of the species had exclusively this condition. In 96% of the females examined, the bristles were symmetrical from side to side, and no species showed intraspecific variation.

Arctrophora group: This group includes about 61 described species in 14 genera, with many of the species unassigned to contemporary genera. As currently defined (Horak et al. 1996), the tribe appears to be restricted to the Indo-Australian Region. We examined 13 females representing nine species in eight genera (Fig. 13). The three-bristled condition was observed in all individuals ($n = 13$), with no variation and no asymmetry. The absence of variation is most likely attributable to the small sample size.

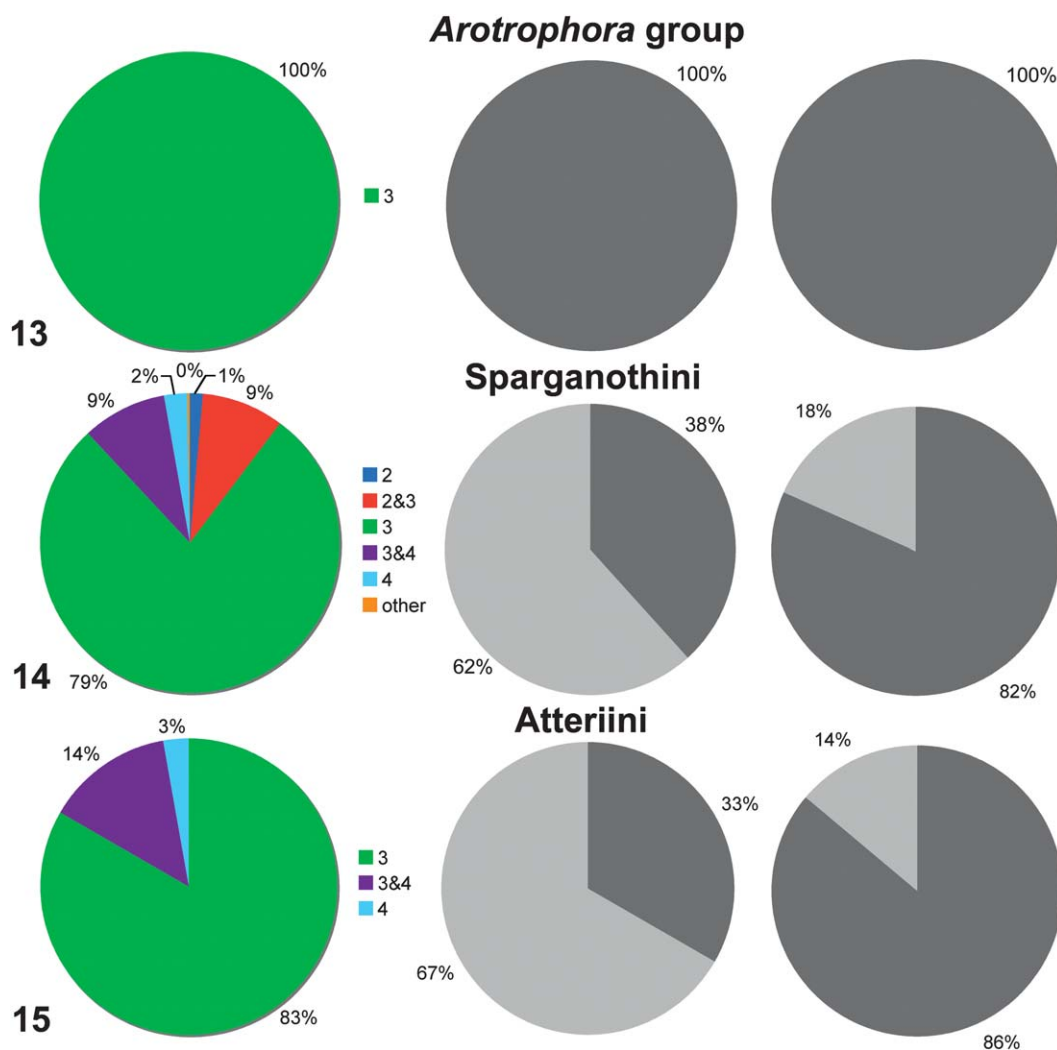
Sparganothini: Sparganothini includes about 219 described species in 17 genera restricted almost exclusively to the New World. Several of the genera have been revised recently: *Sparganothina* Powell (Landry and Powell 2001), *Amorbia* Clemens (Phillips-Rodriguez and Powell 2007), and *Sparganothoides* Lambert & Powell (Kruse and Powell 2009). We examined 361 females representing 96 species in 13 genera. The following combinations were found: 2 bristles ($n = 5$), 2&3 ($n = 32$), 3 ($n = 281$), 3&4 ($n = 33$), 4 ($n = 9$), and other ($n = 1$). The most common condition was a three-bristled

frenulum (Fig. 14), observed in 78% of the females examined; 49% of the species had exclusively three bristles. In 82% of the females examined the bristles were symmetrical from side to side, and 62% of the species showed intraspecific variation.

Atteriini: Atteriini includes about 45 described species in eight genera restricted to the Neotropics. As defined by Powell (1986), the tribe is a compact, monophyletic group easily defined by the highly modified scaling ("corythogyne" sensu Powell 1986) of the female abdomen and associated oviposition behavior. We examined 36 females representing 13 species in seven genera. The following combinations were found: 3 bristles ($n = 30$), 3&4 ($n = 5$), and 4 ($n = 1$). A three-bristled frenulum was the most common condition (Fig. 15), observed in 83% of the individuals; 62% ($n = 8$) of the species had exclusively this condition, but from six of these species we examined only one female. In 86% of the females examined, the bristles were symmetrical from side to side, and 67% of the species showed intraspecific variation.

SUMMARY AND CONCLUSIONS

In this three-part series (i.e., Yang and Brown 2009, Rota et al. 2009, present paper), we examined 10,441 female specimens of tortricid moths representing 2,643 species and 486 genera, including representatives of all major lineages and from every major biogeographic realm. Perhaps the most unexpected observation was the high degree of asymmetry we encountered in bristle number—nearly 12% of all females had a different number of bristles on the left and right side; 32% of species examined had at least one female with asymmetry. It is somewhat surprising that a character assumed to be critical to flight (i.e., facilitating wing



Figs. 13–15. Pie charts showing percentages of specimens with different bristle-number combinations (left), percentage of species with intraspecific variation (middle, dark = species without variation), and percentages of specimens with symmetrical and asymmetrical number of bristles (right, dark = specimens with symmetry). 13, *Arotrophora* group; 14, Sparganothini; 15, Atteriini.

coupling) could be so plastic. However, although not quantified to the same degree as for Tortricidae, variation in female bristle number has been reported for some species of Arrhenophanidae (i.e., “4–14 frenular setae”) (Davis 2003), Pyschidae (D. Davis pers. comm.), and Acrolophidae (D. Davis pers. comm.). Hence, such variation is not unique to Tortricidae.

Although variation in bristle number is rampant at the species, generic, and tribal levels in Tortricidae, a few trends emerged that appear to be of some phylogenetic significance. For example, with exceedingly few exceptions, a two-bristled frenulum is shared by all females of the sister tribes Hilarographini and Chlidanotini (Chlidanotinae) (Yang and Brown 2009). This condition also appears to provide

support for a clade of genera in Polyorthini (Chlidanotinae) (Yang and Brown 2009). In Olethreutinae, a two-bristled frenulum adds support for the monophyly of the *Dichrorampha* species group of Grapholitini (sensu Komai 1999) and a few genera scattered throughout Eucosmini (e.g., *Herpystis* Meyrick and *Rhopalovalva* Kuznetsov) (Rota et al. 2009). Within Tortricinae, Cochylini are unique in that a two-bristled frenulum is the dominant condition. Furthermore, females of nearly all *Phtheochroa* and *Henricus*, putatively the most ancestral genera in the tribe in terms of morphological features (Pogue and Mickevitch 1990), have 3 bristles, so the condition most likely has arisen independently within the tribe. In Ceracini, 4 bristles is the most common condition, but the number is highly unstable, usually with more than 4 bristles.

Adults of Ceracini are the largest tortricids, suggesting that an increase in number of bristles may be related to size. Evidence in support of this may be found in Archipini, where some of the largest species of *Choristoneura*, *Homona*, and *Zacorisca* occasionally have 3&4 or 4&4 bristles; in Euliini, where females of *Varifula* consistently have 4 bristles; and in Cochylini, where females of "*Phalonia*" *grandis* have 4 or 4&5 bristles. However, in other large females, such as *Amorbia* species (Sparganotini) and *Tinacrusis* species (Atteriini), some of the latter nearly as large as Ceracini, a three-bristled frenulum is by far the most common condition. Therefore the large number of bristles in Ceracini may be phylogenetically informative and not merely correlated with large size. In addition, adults of Ceracini are among the very few tortricids that are diurnal, and the increase in bristle number may be associated with this behavior.

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Appendix 1. Table showing the number of bristles for each specimen examined. Taxon names are listed in the first column. The number of bristles in male individuals examined is listed in the second column (* = male with one strong bristle and a second vestigial bristle). The number of bristles in female individuals examined is listed in columns three through eight. For female specimens exhibiting combinations other than the ones represented in columns three through seven, the number of recorded bristles is listed in column eight in the following format: 2(1&3), 1(2&4). The first number refers to the number of females with the bristle-number combination listed in parentheses (i.e., in this species there were two females with one and three bristles and one female with two and four bristles). See text for details.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
PHRICANTHINI							
<i>Phricanthes asperana</i> Meyrick				2			
<i>Phricanthes flexilineana</i> (Walker)	1			4	1		
<i>Phricanthes petulans</i> (Meyrick)				1			
<i>Scolioplecta comptana</i> (Walker)	1		1	1	1		
TORTRICINI							
<i>Accra viridis</i> (Walsingham)				3			
<i>Acleris abietana</i> (Hübner)	1		1	9			
<i>Acleris aestuosa</i> Yasuda	1			2			
<i>Acleris affinatana</i> (Snellen)	1			5			
<i>Acleris albicomana</i> (Clemens)	1			3	2		
<i>Acleris albiscapulana</i> (Christoph)	1			5			
<i>Acleris alnivora</i> Oku	1			5			
<i>Acleris amurensis</i> (Caradja)	1			5			
<i>Acleris arcuata</i> (Yasuda)	1			5			
<i>Acleris arcticana</i> (Guenée)	1			2			
<i>Acleris askoldana</i> (Christoph)	1	1	1	3			
<i>Acleris aspersana</i> (Hübner)	1		1	4			
<i>Acleris atayalicana</i> Kawabe	1			1			
<i>Acleris auricaput</i> Razowski	1		1	4			
<i>Acleris aurichalcana</i> (Bremer)	1			5			
<i>Acleris bergmanniana</i> (Linnaeus)	1		3	2			
<i>Acleris bicolor</i> Kawabe	1			5			
<i>Acleris blanda</i> (Yasuda)	1			1			
<i>Acleris boscana</i> (Fabricius)	1			5		1	
<i>Acleris bowmanana</i> (McDunnough)	1			5			
<i>Acleris braunana</i> (McDunnough)	1			5			
<i>Acleris brittannia</i> Kearfott	1			5			
<i>Acleris caerulescens</i> (Walsingham)	1		1	2	1		
<i>Acleris caledoniana</i> (Stephens)	1			5			
<i>Acleris caliginosana</i> (Walker)	1			4	1		
<i>Acleris celiana</i> (Robinson)	1		1	4			
<i>Acleris cervinana</i> (Fernald)	1	2		3			
<i>Acleris chalybeana</i> (Fernald)	1			3	2		
<i>Acleris chionocentra</i> (Meyrick)	1		1				
<i>Acleris comandrana</i> (Fernald)				2			
<i>Acleris comariana</i> (Lienig & Zeller)	1			5			
<i>Acleris conchyloides</i> (Walsingham)	1		1	4			
<i>Acleris cornana</i> (McDunnough)	1			4			
<i>Acleris crassa</i> Razowski & Yasuda	1			1			
<i>Acleris crategi</i> (Kuznetsov)	1			5			
<i>Acleris cristana</i> (Denis & Schiffermüller)	1		3	5	1	1	

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Acleris curvalana</i> (Kearfott)	1			5			
<i>Acleris dealbata</i> (Yasuda)	1			2			
<i>Acleris delicata</i> (Yasuda & Kawabe)				2			
<i>Acleris delicatana</i> (Christoph)	1			5			
<i>Acleris dentata</i> (Razowski)	1	1		3			
<i>Acleris effractana</i> (Hübner)	1			4			
<i>Acleris elegans</i> Oku	1		1	1			
<i>Acleris emargana</i> (Fabricius)	1			5			
<i>Acleris enitescens</i> (Meyrick)	1			5			
<i>Acleris exsucana</i> (Kennel)	1			5			
<i>Acleris expressa</i> (Filipjev)	1			2			
<i>Acleris extensana</i> (Walker)	1			5			
<i>Acleris ferrugana</i> (Denis & Schiffermüller)	1			4	1		
<i>Acleris filipjevi</i> Obraztsov	1			3			
<i>Acleris fimbriana</i> (Thunberg & Becklin)	1			5			
<i>Acleris flavivittana</i> (Clemens)	1			4	1		
<i>Acleris foliana</i> (Walsingham)	1			5			
<i>Acleris forbesana</i> (McDunnough)	1			5			
<i>Acleris formosae</i> Razowski	1			2			
<i>Acleris forsskaleana</i> (Linnaeus)	1			5			
<i>Acleris fuscotogata</i> (Walsingham)	1	1	1	2			
<i>Acleris glaucomis</i> (Meyrick)	1	1					
<i>Acleris gloveranus</i> (Walsingham)	1		1	4			
<i>Acleris hastiana</i> (Linnaeus)	1			5			
<i>Acleris hippophaeana</i> (Heyden)	1		1	4			
<i>Acleris hispidana</i> (Christoph)	1		1	4			
<i>Acleris holmiana</i> (Linnaeus)	1			4	1		
<i>Acleris hudsoniana</i> (Walker)	1	1		1	1		
<i>Acleris hyemana</i> (Haworth)	1		1	4			
<i>Acleris implexana</i> (Walker)	1		1	2	1		
<i>Acleris inana</i> (Robinson)	1			3			
<i>Acleris indignana</i> (Christoph)	1			2	1		
<i>Acleris issikii</i> Oku	1		1	4			
<i>Acleris japonica</i> (Walsingham)	1			5			
<i>Acleris keiferi</i> Powell	1			1			
<i>Acleris lacordairana</i> (Duponchel)	1			3			
<i>Acleris laterana</i> (Fabricius)	1			5			
<i>Acleris leechi</i> (Walsingham)	1			4			
<i>Acleris lipsiana</i> (Denis & Schiffermüller)	1			4	1		
<i>Acleris literana</i> (Linnaeus)	1	1		4			
<i>Acleris logiana</i> (Clerck)	1		2	7	1		
<i>Acleris longipalpana</i> (Snellen)	1			1			
<i>Acleris lorquiniana</i> (Duponchel)	1			5			
<i>Acleris loxoscia</i> (Meyrick)	1		1	4			
<i>Acleris maccana</i> (Treitschke)	1		1	4			
<i>Acleris maculidorsana</i> (Clemens)	1			5			
<i>Acleris maximana</i> (Barnes & Busck)	1		1	4			
<i>Acleris macdunnoughi</i> Obraztsov	1			2			
<i>Acleris minuta</i> (Robinson)	1	1		4			
<i>Acleris nakajimai</i> Kawabe	1			3			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Acleris negundana</i> (Busck)	1		2	3			
<i>Acleris nigriradix</i> (Filipjev)	1			5			
<i>Acleris nigrolinea</i> (Robinson)	1			5			
<i>Acleris nivisellana</i> (Walsingham)	1			5			
<i>Acleris obtusana</i> (Eversmann)	1		1	4			
<i>Acleris ophthalmicana</i> Razowski & Yasuda	1			1			
<i>Acleris oxycoccana</i> (Packard)	1		2	3			
<i>Acleris paradiseana</i> (Walsingham)	1			5			
<i>Acleris perfundana</i> Kuznetsov	1			5			
<i>Acleris permutana</i> (Duponchel)	1			5			
<i>Acleris phalera</i> (Kuznetsov)	1			3			
<i>Acleris phantastica</i> Razowski & Yasuda	1			3			
<i>Acleris placata</i> (Meyrick)	1			5			
<i>Acleris placidus</i> Yasuda & Kawabe	1			1	1		
<i>Acleris platynotana</i> (Walsingham)	1			5			
<i>Acleris pulchella</i> Kawabe	1	1	3	1			
<i>Acleris quercinana</i> (Zeller)	1			4			
<i>Acleris rantaizana</i> Razowski	1			5			
<i>Acleris razowskii</i> (Yasuda)	1			5			
<i>Acleris rhombana</i> (Denis & Schiffermüller)	1			5			
<i>Acleris robinsoniana</i> (Forbes)	1			5			
<i>Acleris roscidana</i> (Hübner)	1	1	2				
<i>Acleris rufana</i> (Denis & Schiffermüller)	1			9	1		
<i>Acleris sagmatias</i> (Meyrick)	1			1			
<i>Acleris salicicola</i> Kuznetsov	1			2			
<i>Acleris scabrana</i> (Denis & Schiffermüller)	1		5				
<i>Acleris schalleriana</i> (Linnaeus)	1			5	2	3	
<i>Acleris semiannula</i> (Robinson)	1	1	1	3			
<i>Acleris semipurpurana</i> (Kearfott)	1			5			
<i>Acleris senescens</i> (Zeller)	1			5			
<i>Acleris shepherdana</i> (Stephens)	1			5			
<i>Acleris similis</i> (Filipjev)	1			1			
<i>Acleris sparsana</i> (Denis & Schiffermüller)	1			5			
<i>Acleris strigifera</i> (Filipjev)	1			3			
<i>Acleris submaccana</i> (Filipjev)	1			5			
<i>Acleris subnivana</i> (Walker)	1	2		3			
<i>Acleris takeuchi</i> Razowski & Yasuda	1			5			
<i>Acleris tigricolor</i> (Walsingham)	1		2	3			
<i>Acleris tremewani</i> Razowski	1			4			
<i>Acleris tripunctana</i> (Hübner)	1			3	2		
<i>Acleris tsuifengana</i> Kawabe	1			5			
<i>Acleris tunicatana</i> (Walsingham)	1			2			
<i>Acleris ulmicola</i> (Meyrick)	1		1	3	1		
<i>Acleris umbrana</i> (Hübner)	1			2			
<i>Acleris undulana</i> (Walsingham)	1			5			
<i>Acleris variana</i> (Fernald)	1	1	1	3			
<i>Acleris variegana</i> (Denis & Schiffermüller)	1		1	4			
<i>Acleris yasudai</i> Razowski	1			5			
<i>Acleris yasutoshii</i> Kawabe	1		1	4			
<i>Acleris zimmermani</i> (Clarke)	1			3			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Aleimma loeflingiana</i> (Linnaeus)	1	2		3			
<i>Apotoforma cydna</i> Razowski	1			1			
<i>Apotoforma rotundipennis</i> (Walsingham)	1	2					
<i>Apotoforma</i> sp. (Mexico)	1	1					
<i>Archigraapis strigifera</i> Tuck	1	1					
<i>Brachiolia egenella</i> (Walker)	1		2				
<i>Cnesteboda celligera</i> (Meyrick)	1			4	1		
<i>Eboda smaragdinana</i> Walker	1			2			
<i>Exeristeboda exeristis</i> (Meyrick)	1		1				
<i>Paracroesia abievora</i> (Issiki)	1			3			
<i>Paratorna catenuella</i> (Christoph)	1		1				
<i>Paratorna cuprescens</i> Falkovitsh	1		2	2			
<i>Reptilisocia paryphaea</i> (Meyrick)	1			2			
<i>Spatalistis bifasciana</i> (Hübner)	1		2	3			
<i>Spatalistis christophana</i> (Walsingham)	1			5			
<i>Spatalistis gerdia</i> Diakonoff	1			2			
<i>Spatalistis rhopica</i> Meyrick	1			1			
<i>Spatalistis</i> sp. (Japan)	1			2			
<i>Tortrix sinapina</i> (Butler)	1			3	1	1	
<i>Tortrix viridana</i> Linnaeus	1	1	2	2			
<i>Trophocosta cyanoxantha</i> (Meyrick)	1	2					
COCHYLINI							
<i>Aethes angulatana</i> (Robinson)	1	5					
<i>Aethes angustana</i> (Clemens)	1	3					
<i>Aethes argentiimitana</i> (Robinson)	1	5					
<i>Aethes atomosana</i> (Busck)	1	2					
<i>Aethes aurofasciana</i> (Mann)	1	3					
<i>Aethes decimana</i> (Denis & Schiffermüller)	1	2					
<i>Aethes deutschiana</i> (Zetterstedt)	1	1	2	2			
<i>Aethes dilucidana</i> (Stephens)	1						5(2/1)
<i>Aethes flagellana</i> (Duponchel)	1	3					1(2/1)
<i>Aethes floccosana</i> (Walker)	1	4					
<i>Aethes francillana</i> (Fabricius)	1	5					
<i>Aethes hartmanniana</i> (Clerck)	1	1	2	6	1		
<i>Aethes interruptofasciata</i> (Robinson)	1	9					
<i>Aethes kindermanniana</i> (Treitschke)	1	5					
<i>Aethes languidana</i> (Mann)	1	1					
<i>Aethes louisiana</i> (Busck)	1			3			
<i>Aethes margaritana</i> (Haworth)	1	2	3				
<i>Aethes margarotana</i> (Duponchel)	1	5					
<i>Aethes mauritanica</i> (Walsingham)	1	1					
<i>Aethes moribundana</i> (Staudinger)	1	3					
<i>Aethes nefandana</i> (Kennel)	1				1		
<i>Aethes patricia</i> Metzler	1	2					
<i>Aethes piercei</i> Obratzsov	1			3			
<i>Aethes rana</i> (Busck)	1	5					
<i>Aethes rectilineana</i> (Caradja)	1	5					
<i>Aethes rubigana</i> (Treitschke)	1	4		4			
<i>Aethes rutilana</i> (Hübner)	1	5					

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Aethes sanguinana</i> (Treitschke)	1	5					
<i>Aethes seriatana</i> (Zeller)	1	5					
<i>Aethes smeathmanniana</i> (Fabricius)	1	5					
<i>Aethes sonorae</i> (Walsingham)	1	5					
<i>Aethes spartinana</i> (Barnes & McDunnough)	1	4					
<i>Aethes tesseraana</i> (Denis & Schiffermüller)	1	3	1	2			
<i>Aethes tornella</i> (Walsingham)	1	4					
<i>Aethes triangulana</i> (Treitschke)	1	1		3			
<i>Aethes williana</i> (Brahm)	1	6	1				
<i>Agapeta hamana</i> (Linnaeus)	1			4	4		
<i>Agapeta zoegana</i> (Linnaeus)	1	5					
" <i>Atroposia</i> " <i>oenotherana</i> (Riley)	1	5					
<i>Carolella bimaculana</i> (Robinson)	1	4	1				
<i>Carolella sartana</i> (Hübner)	1	5					
<i>Cirrothaumatia tornosema</i> (Clarke)		5					
<i>Cirrothaumatia vesta</i> (Clarke)	1	1					
<i>Cochylidia altivaga</i> Diakonoff	1	5					
<i>Cochylidia contumescens</i> (Meyrick)	1	5					
<i>Cochylidia heydeniana</i> (Herrich-Schäffer)	1	5					
<i>Cochylidia implicitana</i> (Wocke)	1	5					
<i>Cochylidia moguntiana</i> (Rössler)	1	3					
<i>Cochylidia richteriana</i> (F. v. Röslerstamm)	1	5					
<i>Cochylidia rupicola</i> (Curtis)	1	5					
<i>Cochylidia subroseana</i> (Haworth)	1	5					
<i>Cochylimorpha alternana</i> (Stephens)	1	2		5			
<i>Cochylimorpha cultana</i> (Lederer)	1	3					
<i>Cochylimorpha elongana</i> (F. v. Röslerstamm)	1	2					
<i>Cochylimorpha halophilana</i> (Christoph)	1	2					
<i>Cochylimorpha hilarana</i> (Herrich-Schäffer)	1			5			
<i>Cochylimorpha jaculana</i> (Snellen)	1		1	4			
<i>Cochylimorpha jucundana</i> (Treitschke)	1			4			
<i>Cochylimorpha moriutti</i> (Kawabe)	1	3					
<i>Cochylimorpha nipponana</i> (Razowski)				2			
<i>Cochylimorpha perfusana</i> (Guenée)	1			1			
<i>Cochylimorpha peucedana</i> (Ragonot)	1			1			
<i>Cochylimorpha santolinana</i> (Staudinger)	1		1				
<i>Cochylimorpha straminea</i> (Haworth)	1	2		3			
<i>Cochylimorpha woliniana</i> (Schleich)	1	4	1				
<i>Cochylis amoenana</i> Kennel	1	2					
<i>Cochylis atricapitana</i> (Stephens)	1	5		1			
<i>Cochylis caulocatax</i> Razowski	1						5(2/1)
<i>Cochylis dubitana</i> (Hübner)	1	5					
<i>Cochylis faustana</i> (Kennel)	1	1					
<i>Cochylis flaviciliana</i> (Westwood)	1	3					
<i>Cochylis hybridella</i> (Hübner)	1	5					
<i>Cochylis molliculana</i> Zeller	1	2					
<i>Cochylis pallidana</i> Zeller	1	5					
<i>Cochylis posterana</i> Zeller	1	5					
<i>Cochylis psychrasema</i> (Meyrick)	1	1					
<i>Cochylis ringsi</i> Metzler	1	5					

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Cochylis roseana</i> (Haworth)	1	5					
<i>Cochylis salebrana</i> Mann	1	2					
" <i>Cochylis</i> " <i>bunteoides</i> Forbes	1			2			
<i>Commophila aeneana</i> (Hübner)	1	1		4			
<i>Cryptocochylis conjunctana</i> (Mann)	1	1	1	3			
" <i>Cybillia</i> " <i>hubbardana</i> (Busck)	1	5					
" <i>Decuma</i> " n. sp. (Texas)	1	1		1			
<i>Diceratura ostrinana</i> (Guenée)	1	5					
<i>Diceratura rhodographa</i> Djakonov	1	5					
<i>Diceratura roseofasciana</i> (Mann)	1	2					
<i>Eugnosta beevorana</i> (Comstock)	1	5	1				
<i>Eugnosta busckana</i> (Comstock)	1	3	2				
<i>Eugnosta deceptana</i> (Busck)	1	5					
<i>Eugnosta dives</i> (Butler)	1	2	1				
<i>Eugnosta erigeronana</i> (Riley)	1	5					
<i>Eugnosta hydrargyrana</i> (Eversmann)	1		1	2	1		
<i>Eugnosta lathoniana</i> (Hübner)	1	1	1		1		
<i>Eugnosta magnificana</i> (Rebel)	1			4			
<i>Eugnosta mexicana</i> (Busck)	1	5					
<i>Eugnosta molybdina</i> (Clarke)	1	2					
<i>Eugnosta pamirana</i> Obratzsov	1		1				
<i>Eugnosta ussuriana</i> (Caradja)	1	3		2			
<i>Eugnosta willettana</i> (Comstock)	1	4		1			
<i>Eupoecilia ambiguella</i> (Hübner)	1	5					
<i>Eupoecilia angustana</i> (Hübner)	1	5					
<i>Eupoecilia cebrana</i> (Hübner)	1	1	1				
<i>Eupoecilia charixantha</i> (Meyrick)	1	1					
<i>Eupoecilia citrinana</i> Razowski	1	5					
<i>Eupoecilia diana</i> Razowski	1	1					
<i>Eupoecilia eucalypta</i> (Meyrick)	1	3					
<i>Eupoecilia kobeana</i> Razowski	1	5					
<i>Eupoecilia reliquatrix</i> (Meyrick)	1	5					
<i>Eupoecilia sanguisorbana</i> (Herrich-Schäffer)	1	5					
<i>Eupoecilia tenggerensis</i> (Diakonoff)	1	1					
<i>Eupoecilia wegneri</i> (Diakonoff)	1	5					
<i>Falseuncaria degreyana</i> (McLachlan)	1	2		1			
<i>Falseuncaria ruficiliana</i> (Haworth)	1	4	1				
<i>Gynnidomorpha alismana</i> (Ragonot)	1	2					
<i>Gynnidomorpha minimana</i> (Caradja)	1			1			
<i>Gynnidomorpha permixtana</i> (Denis & Schiffermüller)	1	5					
<i>Gynnidomorpha romonana</i> (Kearfott)	1	1					
<i>Gynnidomorpha rubricana</i> (Peyerimhoff)	1	5					
<i>Gynnidomorpha sphaenophora</i> (Diakonoff)	1	1					
<i>Gynnidomorpha vectisana</i> (Humphreys & Westwood)	1	5					
<i>Henricus cognata</i> (Walsingham)	1	1	1	3			
<i>Henricus comes</i> (Walsingham)	1		2	3			
<i>Henricus contrastana</i> (Kearfott)	1			5			
<i>Henricus fuscodorsana</i> (Kearfott)	1			5			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Henricus icogramma</i> (Clarke)	1			1			
<i>Henricus infernalis</i> (Heinrich)	1			5			
<i>Henricus macrocarpana</i> (Walsingham)	1			5			
<i>Henricus melanoleuca</i> (Clarke)	1			2			
<i>Henricus ophryodes</i> (Meyrick)	1			4			
<i>Henricus umbrabasana</i> (Kearfott)	1			5			
<i>Hysterophora maculosana</i> (Haworth)	1			4			
<i>Lasiothyris ficta</i> (Razowski & Becker)	1	1					
<i>Lincicochylis argentifusa</i> (Walsingham)	1	1					
<i>Lorita baccharivora</i> Pogue	1	1		4			
<i>Lorita scarificata</i> (Meyrick)	1	1	3	1			
"Morta" n. sp. (USA)	1	4	1	1			
"Nychthia" <i>pimana</i> (Busck)	1	5					
"Nychthia" <i>yuccatana</i> (Busck)	1	5					
<i>Pairazona serena</i> (Clarke)	1	1					
"Phalonia" <i>grandis</i> (Busck)	1					3	2(4/5)
<i>Phalonidia affinitana</i> (Douglas)	1	3	2				
<i>Phalonidia albipalpana</i> (Zeller)	1		1	4			
<i>Phalonidia aliena</i> Kuznetsov	1		3	2			
<i>Phalonidia chlorolitha</i> (Meyrick)	1			5			
<i>Phalonidia contractana</i> (Zeller)	1	4	1				
<i>Phalonidia curvistrigana</i> (Stainton)	1	5					
<i>Phalonidia diamphidia</i> (Clarke)	1		1	1			
<i>Phalonidia dysodona</i> (Caradja)	1	2					
<i>Phalonidia gilvicomana</i> (Zeller)	1	5					
<i>Phalonidia latifasciana</i> Razowski	1			5			
<i>Phalonidia latipunctana</i> (Walsingham)	1		1				
<i>Phalonidia lepidana</i> (Clemens)	1	7	2				
<i>Phalonidia manniana</i> (F. v. Röslerstamm)	1	5					
<i>Phalonidia melanothicta</i> (Meyrick)	1	2	2	1			
<i>Phalonidia mesotypa</i> Razowski	1	5					
<i>Phalonidia unguifera</i> (Razowski)	1			1			
<i>Phalonidia zygota</i> Razowski	1		1	2			
<i>Phtheochroa alphitopa</i> (Clarke)	1			1			
<i>Phtheochroa aureoalbida</i> (Walsingham)	1			1			
<i>Phtheochroa baracana</i> (Busck)	1		1	4			
<i>Phtheochroa birdana</i> (Busck)	1		1	4			
<i>Phtheochroa canariana</i> (Barnes & Busck)	1		1	3			
<i>Phtheochroa duponchelana</i> (Duponchel)	1			2			
<i>Phtheochroa exasperantana</i> (Christoph)	1			1			
<i>Phtheochroa frigidana</i> (Guenée)	1			1			
<i>Phtheochroa fulvicinctana</i> (Constant)	1		1	1			
<i>Phtheochroa fulviplicana</i> (Walsingham)	1			4	1		
<i>Phtheochroa gigantea</i> (Busck)	1			1			
<i>Phtheochroa huachucana</i> (Kearfott)	1			3	2		
<i>Phtheochroa inopiana</i> (Haworth)	1			1			
<i>Phtheochroa modestana</i> (Busck)	1			4			
<i>Phtheochroa perspicuana</i> (Barnes & Busck)	1			4	2		
<i>Phtheochroa pistrinana</i> (Erschoff)	1		1	4			
<i>Phtheochroa pulvillana</i> (Herrich-Schäffer)	1			5			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Phtheochroa purana</i> (Guenée)	1		1	3			
<i>Phtheochroa riscana</i> (Kearfott)	1			5			
<i>Phtheochroa rugosana</i> (Hübner)	1			4	1		
<i>Phtheochroa schreibersiana</i> (Frölich)	1		1	6		1	
<i>Phtheochroa sodalana</i> (Haworth)	1			2			
<i>Phtheochroa terminana</i> (Busck)	1	2	3				
<i>Phtheochroa turialba</i> (Busck)	1			5			
<i>Phtheochroa vulneratana</i> (Zetterstedt)	1	1					
<i>Phtheochroa waracana</i> (Kearfott)	1		1				
<i>Phtheochroa zacualpana</i> (Busck)	1			2			
<i>Phtheocroides apicana</i> (Walsingham)	1			4	1		
<i>Phtheocroides clandestina</i> Razowski	1			4			
<i>Platphalonidia campicolana</i> (Walsingham)	1			5			
<i>Platphalonidia felix</i> (Walsingham)	1			5			
<i>Platphalonidia fusifera</i> (Meyrick)	1		1				
<i>Platphalonidia galbana</i> (Meyrick)	1			1			
<i>Platphalonidia lavana</i> (Busck)	1		1	4			
<i>Platphalonidia mendora</i> (Clarke)	1			1			
<i>Platphalonidia plicana</i> (Walsingham)	1			1			
" <i>Poterioparvus</i> " <i>wiscana</i> (Kearfott)	1	4					
<i>Prochlidonia amiantana</i> (Hübner)	1			5			
" <i>Recavicula</i> " <i>arthuri</i> (Dang)	1	5					
" <i>Recavicula</i> " <i>aurorana</i> (Kearfott)	1	2					
" <i>Recavicula</i> " <i>hoffmanana</i> (Kearfott)	1	5					
" <i>Recavicula</i> " <i>hospes</i> (Walsingham)	1	5					
" <i>Recavicula</i> " <i>punctadiscana</i> (Kearfott)	1	3					
" <i>Recavicula</i> " <i>temerana</i> (Busck)	1	2					
" <i>Recavicula</i> " <i>viscana</i> (Kearfott)	1	5					
<i>Rolandylis fusca</i> Pogue	1	4					
<i>Rudenia leguminana</i> (Busck)	1	5					
<i>Saphenista nephelodes</i> (Clarke)	1			1			
<i>Saphenista nongrata</i> Razowski	1	1	1				
<i>Saphenista parvimaculana</i> (Walsingham)	1			2			
<i>Saphenista penai</i> (Clarke)	1		1				
<i>Saphenista semistrigata</i> Forbes	1	1					
<i>Thyraylia bunteana</i> (Robinson)	1	4					
<i>Thyraylia discana</i> (Kearfott)	1	5					
<i>Thyraylia hollandana</i> (Kearfott)	1	5					
<i>Thyraylia nana</i> (Haworth)	1	5					
CNEPHASIINI							
<i>Cnephasia abrasana</i> (Duponchel)	1		3	1	1		
<i>Cnephasia asseclana</i> (Denis & Schiffermüller)	1	1	1	8			
<i>Cnephasia chrysanthæana</i> (Duponchel)	1			5			
<i>Cnephasia communana</i> (Herrich-Schäffer)	1			4	1		
<i>Cnephasia conspersana</i> Douglas	1		1	2	1		
<i>Cnephasia cupressivorana</i> (Staudinger)	1			2			1(3/5)
<i>Cnephasia ecullyana</i> Réal	1			4			
<i>Cnephasia genitalana</i> Pierce & Metcalfe	1	2	1	2			
<i>Cnephasia heinemanni</i> Obraztsov	1	1	1	2			1(2/1)

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Cnephasia incertana</i> (Treitschke)	1		1	2	2		
<i>Cnephasia longana</i> (Haworth)	1	2		3			
<i>Cnephasia orientana</i> (Alpheraky)	1		3				
<i>Cnephasia pasiuana</i> (Hübner)	1		1	2	1		1 (5/4)
<i>Cnephasia stephensiana</i> (Doubleday)	1	1	2	1			1 (2/1)
<i>Decodes asapheus</i> Powell	1			5			
<i>Decodes basi plagana</i> (Walsingham)	1			5			
<i>Decodes bicolor</i> Powell	1			4			
<i>Decodes catherinae</i> Powell	1			1	1		
<i>Decodes fragariana</i> (Busck)	1		2	2	1		
<i>Decodes horariana</i> (Walsingham)	1			5			
<i>Decodes johnstoni</i> Powell					1		
<i>Decodes lundgreni</i> Powell	1				1	1	
<i>Decodes macswaini</i> Powell	1			3			
<i>Decodes montanus</i> Powell	1			2	3		
<i>Decodes tahoense</i> Powell	1	1		2			
<i>Decodes zimapanus</i> Powell				1			
<i>Decodina mazatlana</i> Powell	1		1	1			
<i>Doloploca praeviella</i> (Erschoff)	1			1	2	2	
<i>Doloploca punctulana</i> (Denis & Schiffermüller)	1		3	1	1		
<i>Eana argentana</i> (Clerck)	1			2	3		
<i>Eana canescana</i> (Guenée)	1			5			
<i>Eana georgiella</i> (Hulst)	1			3		2	
<i>Eana idahoensis</i> Obraztsov	1			2		1	
<i>Eana incanana</i> (Stephens)	1	1	1	2	1		
<i>Eana nervana</i> (Jannis)				1			
<i>Eana osseana</i> (Scopoli)	1			2	2		
<i>Eana penziana</i> (Thunberg & Becklin)	1			3	1		
<i>Kawabeia ignavana</i> (Christoph)	1	1		4			
<i>Kawabeia nigricolor</i> Yasuda & Kawabe				2			
<i>Kawabeia razowskii</i> (Kawabe)	1		1	3	1		
<i>Neosphalerptera nubilana</i> (Hübner)	1			4	1		
<i>Oxypteron impar</i> Staudinger	1						1 (3/1)
<i>Propiromorpha rhodophana</i> (Herrich-Schäffer)	1		1	1			
<i>Tortricodes alternella</i> (Denis & Schiffermüller)	1			5			
<i>Xeronephasia rigana</i> (Sodoffsky)	1		2	3			
EULIINI							
<i>Accuminulia buscki</i> Brown	1			5			
<i>Acmanthina acmanthes</i> (Meyrick)	1			4		1	
<i>Acroplectis haemanthes</i> Meyrick	1		2	3			
<i>Anopina arizonana</i> (Walsingham)			2	3			
<i>Anopina chelatana</i> Brown & Powell				1			
<i>Anopina confusa</i> Obraztsov	1			1			
<i>Anopina ednana</i> (Kearfott)	1		3	2			
<i>Anopina eleonora</i> Obraztsov	1			5			
<i>Anopina glossana</i> Brown & Powell	1			2			
<i>Anopina hermana</i> Brown & Powell	1			2			
<i>Anopina hilasma</i> (Walsingham)		1					
<i>Anopina incana</i> (Walsingham)	1			3			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Anopina internacionana</i> Brown & Powell	1		2	3			
<i>Anopina silvertanana</i> Obraztsov	1			5			
<i>Anopina triangulana</i> (Kearfott)	1			5			
<i>Anopina undata</i> (Walsingham)	1			1			
<i>Anopina wrighti</i> Brown & Powell	1		1	3			
<i>Anopinella fana</i> Brown & Adamski	1		1				
<i>Anopinella larana</i> Brown & Adamski				1			
<i>Anopinella nr. larana</i> Brown & Adamski			1				
<i>Anopinella macrosema</i> Brown & Adamski				1			
<i>Anopinella rica</i> Brown & Adamski					1		
<i>Anopinella triquetra</i> (Walsingham)	1		1	3	1		
n. gen. n. sp. (Brazil)				4			
<i>Apolychrosis candidus</i> Pogue	1	5					
<i>Apolychrosis ferruginus</i> Pogue	1	1					
<i>Apolychrosis synchysis</i> Pogue	1	5					
<i>Apotomops spomotopa</i> Brown & Razowski				1			
<i>Apotomops texasana</i> (Blanchard & Knudson)	1			5			
<i>Apotomops wellingtoniana</i> (Kearfott)	1		1	4			
<i>Argentulia montana</i> (Bartlett-Calvert)	1			2			
<i>Atepa colaptes</i> Razowski	1	5					
<i>Bidorpitia cryptica</i> Brown				1			
<i>Bonagota arizonae</i> Razowski & Becker	1	1	3	1			
<i>Bonagota cranaodes</i> (Meyrick)	1	1		4			
<i>Chamelania</i> sp. (Mexico)	1	3					
<i>Chapoania dentigera</i> Razowski	1		1	4			
<i>Chileulia stalactitis</i> (Meyrick)	1		1	4			
<i>Chilips claduncus</i> Razowski	1		2	3			
<i>Chrysoxena auriferana</i> (Busck)	1			1			
<i>Clarkenia miramundi</i> Razowski				1			
<i>Clarkeulia bourquini</i> (Clarke)				3			
<i>Clarkeulia dimorpha</i> (Clarke)	1			4			
<i>Clarkeulia epistica</i> (Clarke)	1			4			
<i>Clarkeulia excerptana</i> (Walker)				2			
<i>Clarkeulia</i> sp. (Brazil)	1			1			
<i>Clarkeulia virga</i> (Clarke)	1			2			
<i>Cuproxena auga</i> (Razowski & Becker)	1	2		2			
<i>Cuproxena bramiliana</i> Brown				1			
<i>Cuproxena cornuta</i> Brown & Obraztsov	1	1		2			
<i>Cuproxena flosculana</i> (Walsingham)	1			2			
<i>Cuproxena latiana</i> Brown				2			
<i>Cuproxena minimana</i> Brown	1	2					
<i>Cuproxena neonereidana</i> Brown				3			
<i>Cuproxena paracornuta</i> Brown			4	1			
<i>Cuproxena triphera</i> Brown & Obraztsov				2			
<i>Deltinea costalimai</i> Pastrana				2			
<i>Dimorphopalpa albopunctata</i> Brown				2			
<i>Dimorphopalpa striatana</i> Brown	1			1			
<i>Dorithia consacculana</i> Brown				1			
<i>Dorithia meridionalis</i> Brown	1		1	3			
<i>Dorithia occidentana</i> Brown				3			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Dorithia peroneana</i> (Barnes & Busck)	1			1			
<i>Dorithia pseudocrucifer</i> Brown	1		1	4			
<i>Dorithia semicircularana</i> (Fernald)	1			5			
<i>Dorithia trigonana</i> Brown & Obratsov	1			5			
<i>Dorithia wellingana</i> Brown				1			
<i>Eliachna chileana</i> Razowski	1			5			
<i>Eliachna digitana</i> Brown & McPherson	1			4			
<i>Ernocornutia capronata</i> Razowski	1			1			
<i>Ernocornutia catopta</i> Razowski	1			1			
<i>Eubetia bigaulae</i> Brown	1		2	2			
<i>Eulia ministrana</i> (Linnaeus)	1		2	3			
<i>Galomecalpa meridana</i> Razowski & Brown				1			
<i>Gauruncus gelastes</i> Razowski	1			3			
<i>Gauruncus venezolanus</i> Razowski & Brown	1			1			
<i>Hynhamia ochroleuca</i> Razowski & Brown	1			2	1		
<i>Hynhamia</i> n. sp. (Costa Rica)				2			
<i>Inape xerophanes</i> (Meyrick)				1			
<i>Lobogenesis larana</i> Brown	1		4	1			
<i>Neoeulia</i> sp. (Mexico)	1			3			
<i>Netechma caesiata</i> (Clarke)	1	4					1 (2/1)
<i>Netechma pyrrhodelta</i> (Meyrick)	1	1					
<i>Netechma spinea</i> Razowski	1			1			
<i>Netechma similis</i> Brown & Adamski	1						1 (2/1)
<i>Netechma technema</i> (Walsingham)	1	2					
<i>Netechma</i> sp. (Venezuela)	1	1	2	2			
<i>Odonthalitus conservanus</i> Brown				1			
<i>Oregocerata orcula</i> Razowski				1			
<i>Ortognathosia santamariana</i> Razowski	1			2			
<i>Paraptila argocosma</i> Meyrick				1			
<i>Paraptila cornucopis</i> (Walsingham)	1			5			
<i>Paraptila gamma</i> (Walsingham)	1			1			
<i>Paraptila pseudogamma</i> Brown				1			
<i>Popayanita ptycha</i> Razowski				1			
<i>Proeulia approximata</i> (Butler)				1			
<i>Proeulia boliviae</i> Razowski				1			
<i>Proeulia chrysopteris</i> (Butler)	1			5			
<i>Proeulia clenchi</i> Clarke	1		1				
<i>Proeulia griseiceps</i> (Aurivillius)	1			4			
<i>Proeulia leonina</i> (Butler)	1		1	3			
<i>Proeulia onerata</i> Razowski	1			1	1		
<i>Proeulia robinsoni</i> (Aurivillius)	1		1	2	2		
<i>Proeulia tenotias</i> (Meyrick)	1		1	4			
<i>Proeulia triquetra</i> Obratsov	1			4			
<i>Pseudapina lanceovalva</i> Brown	1	1					
<i>Pseudomeritasis cordigera</i> (Walsingham)	1		1	1			
<i>Ptychocroca crocoptycha</i> (Meyrick)	1			5			
<i>Ptychocroca galenia</i> (Razowski)	1		1	3			
<i>Ptychocroca keelioides</i> Brown & Razowski	1		1	4			
<i>Ptychocroca lineabasalis</i> Brown & Razowski	1		2	2		1	
<i>Ptychocroca nigropenicillia</i> Brown & Razowski	1		1	4			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Punctapinella braziliانا</i> Brown			1	1			
<i>Punctapinella conchitis</i> (Meyrick)				1			
<i>Quasieulia jaliscana</i> Razowski & Brown	1	1	1				
<i>Rebinea erebina</i> (Butler)	1			5			
<i>Seticosta arachnogramma</i> (Meyrick)	1		1				
<i>Seticosta rubicola</i> Brown & Nishida			1				
<i>Strophotina chorestis</i> (Razowski & Becker)				5			
<i>Strophotina strophota</i> (Meyrick)		1		1			
<i>Subtrastillaspis hypochloris</i> (Meyrick)	1	2					
<i>Terinebrica orthoscia</i> (Meyrick)				1			
<i>Terinebrica pharetrata</i> Razowski	1			2			
<i>Terinebrica seiugata</i> Razowski	1			1			
<i>Terinebrica tenebrica</i> Razowski	1			1			
<i>Thalleulila</i> sp. (Costa Rica)	1			5			
<i>Transtillaspis brandinojuxta</i> Razowski	1			1			
<i>Transtillaspis hedychnium</i> Razowski				3			
<i>Transtillaspis tucumana</i> Razowski & Brown	1			2			
<i>Tylopeza zelotypa</i> (Meyrick)	1			1			
<i>Uelia sepidapex</i> Razowski	1			2			
<i>Varifula</i> sp. (Chile)	1					3	1 (4/5)
MICTOPSICHIA GROUP							
<i>Chamaepsichia durantei</i> (Walsingham)	1			3			
<i>Mitocommosis argus</i> (Walsingham)	1			2			
<i>Mitocommosis nigromaculata</i> (Issiki)	1			3			
<i>Mitopsichia gemmisparana</i> (Walker)	1			4	1		
<i>Mitopsichia Hübneriana</i> (Stoll)	1			4			
<i>Mitopsichia miocentra</i> (Meyrick)			1				
ORTHOCOMOTIS GROUP							
<i>Orthocomotis altivolans</i> Brown	1			2			
<i>Orthocomotis attonsa</i> Razowski	1			1			
<i>Orthocomotis chaldara</i> (Druce)	1			5			
<i>Orthocomotis euchaldara</i> Clarke	1			1			
<i>Orthocomotis exolivata</i> Clarke	1			4	1		
<i>Orthocomotis herbacea</i> Clarke	1			3			
<i>Orthocomotis herbaria</i> (Busck)	1			5			
<i>Orthocomotis longicilia</i> Brown	1			1			
<i>Orthocomotis magicana</i> (Zeller)	1		1	4			
<i>Orthocomotis melania</i> Clarke	1			1			
<i>Orthocomotis melanochlora</i> (Meyrick)	1			2			
<i>Orthocomotis mareda</i> Clarke	1			5			
<i>Orthocomotis pseudolivata</i> Clarke	1		2	3			
<i>Orthocomotis smaragditi</i> (Meyrick)	1			5			
<i>Orthocomotis twila</i> Clarke	1			3			
<i>Paracomotis smaragdophaea</i> (Meyrick)	1			5			
SCHOENOTENINI							
<i>Barygnathella acrogonia</i> (Diakonoff)				1			
<i>Barygnathella chrysauges</i> (Diakonoff)					1		

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Barygnathella ophiodora</i> (Diakonoff)					1		
<i>Campotenes chrysopluta</i> (Diakonoff)			1				
<i>Diactenis plumula</i> Diakonoff			1				
<i>Diactenis pteroneura</i> Meyrick	1			3			
<i>Epitrichosma mellosa</i> (Diakonoff)		2					
<i>Metachorista megalophrys</i> Diakonoff			1				
<i>Metachorista ursula</i> Meyrick				1			
<i>Nesoscopa exsors</i> Meyrick	1	1		3	1		
<i>Palaeotoma styphelana</i> Meyrick	1		1				
<i>Proselena annosana</i> Meyrick	1	1	1				
<i>Protarchella nivis</i> (Diakonoff)				2			
<i>Protarchella paraptera</i> (Meyrick)	1			3			
<i>Schoenotenes luminosa</i> Diakonoff		1					
<i>Snodgrassia buruana</i> (Diakonoff)				1			
ARCHIPINI							
<i>Acroceuthes metaxanthana</i> (Walker)	1			3			
<i>Acropolitis canana</i> (Walker)				1			
<i>Acropolitis magnana</i> (Walker)	1			1			
<i>Acropolitis rudisana</i> (Walker)				1			
<i>Adoxophyes aurantia</i> Clarke			2	3			
<i>Adoxophyes aurantiana</i> Bradley					1		
<i>Adoxophyes aurata</i> Diakonoff	1			4			1(4/2)
<i>Adoxophyes congruana</i> (Walker)	1		1	3			1(3/1)
<i>Adoxophyes fasciculana</i> (Walker)	1		1	4			
<i>Adoxophyes flagrans</i> Meyrick	1				1		
<i>Adoxophyes furcatana</i> (Walker)	1		2	2	1		
<i>Adoxophyes melia</i> Clarke	1		4	2			
<i>Adoxophyes negundana</i> (McDunnough)	1			3	1	1	
<i>Adoxophyes orana</i> (F. v. Röslerstamm)	1	2		3			
<i>Adoxophyes parastrophia</i> Meyrick	1		3	2			
<i>Adoxophyes perstricta</i> Meyrick	1		2				
<i>Adoxophyes poecilogramma</i> Clarke	1		1	4			
<i>Adoxophyes privatana</i> (Walker)	1			5			
<i>Adoxophyes templana</i> (Pagenstecher)	1			1			
<i>Allodemis pullatana</i> (Snellen)	1		1	1			
<i>Allodemis</i> sp. (Malaysia)	1			5			
<i>Aneuxanthia locupletana</i> (Hübner)	1			2			
<i>Anisotenes dracodonta</i> Diakonoff				1			
<i>Aphelia alleniana</i> (Fernald)	1			1	3		
<i>Aphelia inumbratana</i> (Christoph)	1	1			1		
<i>Aphelia ochreana</i> (Hübner)	1	1	1	1		2	
<i>Aphelia paleana</i> (Hübner)	1			1	3	1	
<i>Aphelia peramplana</i> (Hübner)	1			1	1		
<i>Aphelia unitana</i> (Hübner)	1			1	3	1	
<i>Aphelia viburnana</i> (Fabricius)	1			2		3	
<i>Aplastoceros dentifera</i> Diakonoff				2			
<i>Apoctena flavescens</i> (Butler)	1				1		
<i>Apoctena pictoriana</i> (Felder & Rogenhofer)				1			
<i>Archepandemis borealis</i> Freeman	1		3			1	

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Archips abiephage</i> (Yasuda)	1		1				
<i>Archips alberta</i> (McDunnough)	1			2			
<i>Archips argyrospila</i> (Walker)	1		1	2		2	
<i>Archips asiaticus</i> Walsingham	1		1	3	1		
<i>Archips betulana</i> (Hübner)	1			4	1		
<i>Archips breviplicanus</i> Walsingham	1			5			
<i>Archips cerasivorana</i> (Fitch)	1		1	4			
<i>Archips crataegana</i> (Hübner)	1			4	1		
<i>Archips dispilanus</i> (Walker)	1			4	1		
<i>Archips dissitanus</i> (Grote)	1	1	2	2			
<i>Archips expansa</i> (Diakonoff)				1			
<i>Archips fervidana</i> (Clemens)	1			5			
<i>Archips formosanus</i> (Kawabe)	1			5			
<i>Archips fumosus</i> Kodama	1			2	1		
<i>Archips fuscocupreana</i> Walsingham	1		2	2	1		
<i>Archips georgiana</i> (Walker)	1	1		4			
<i>Archips goyerana</i> Kruse	1	1	1	1	1		
<i>Archips grisea</i> (Robinson)	1		1	3	1		
<i>Archips infumatana</i> (Zeller)	1			4		1	
<i>Archips ingentana</i> (Christoph)	1		1	3		1	
<i>Archips insulanus</i> (Kawabe)	1		2	3			
<i>Archips issikii</i> Kodama	1			5			
<i>Archips machlopi</i> (Meyrick)	1			5			
<i>Archips magnifica</i> Tuck	1			1			
<i>Archips magnoliana</i> (Fernald)	1		1	3			
<i>Archips meridionalis</i> Yasuda & Kawabe	1	1		4			
<i>Archips micaceana</i> (Walker)	1			5			
<i>Archips myrrhophanes</i> (Meyrick)	1			3			
<i>Archips negundana</i> (Dyar)	1			3	2		
<i>Archips nigricaudana</i> Walsingham	1			5			
<i>Archips nigriplagana</i> Franclemont	1			5			
<i>Archips occidentalis</i> Walsingham	1			2	1		
<i>Archips oporana</i> (Linnaeus)	1			5			
<i>Archips packardiana</i> (Fernald)	1		1	3	1		
<i>Archips paredraea</i> (Meyrick)	1			4	1		
<i>Archips peratratus</i> Yasuda	1		4	1			
<i>Archips philippa</i> (Meyrick)	1			1			
<i>Archips podana</i> (Scopoli)	1			5			
<i>Archips pulchra</i> (Butler)	1		1	2	2		
<i>Archips purpurana</i> (Clemens)	1			4		1	
<i>Archips rileyana</i> (Grote)	1			2	3		
<i>Archips rosana</i> (Linnaeus)	1			5			
<i>Archips semiferanus</i> (Walker)	1		1	2	1	1	
<i>Archips semistructa</i> (Meyrick)	1		2	3			
<i>Archips shibatai</i> Kawabe	1			2		2	
<i>Archips strianus</i> Fernald	1			2	2	1	
<i>Archips taiwanensis</i> Kawabe	1			1			
<i>Archips termias</i> (Meyrick)	1		3	1			
<i>Archips viola</i> Falkovitsh	1	1		4			
<i>Archips wallacei</i> Tuck	1	1					

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Archips xylosteana</i> (Linnaeus)	1			2	2	1	
<i>Argyrotaenia alisellana</i> (Robinson)	1			3	1	1	
<i>Argyrotaenia amatana</i> (Dyar)	1		2	3			
<i>Argyrotaenia atima</i> (Walsingham)	1	1	2	2			
<i>Argyrotaenia burnsororum</i> Powell	1		2	3			
<i>Argyrotaenia citharexylana</i> (Zeller)		1	1	3			
<i>Argyrotaenia coconinana</i> Brown & Cramer	1			5			
<i>Argyrotaenia cupressae</i> Powell	1		1	1			
<i>Argyrotaenia dichroaca</i> (Walsingham)	1		1	2			
<i>Argyrotaenia dorsalana</i> (Dyar)	1			2		3	
<i>Argyrotaenia floridana</i> Obraztsov	1		2	3			
<i>Argyrotaenia franciscana</i> (Walsingham)	1			4	1		
<i>Argyrotaenia graceana</i> Powell	1			2	2	1	
<i>Argyrotaenia guatemalica</i> (Walsingham)			1				
<i>Argyrotaenia ivana</i> (Fernald)	1		2	3			
<i>Argyrotaenia juglandana</i> (Fernald)	1			3	2		
<i>Argyrotaenia kimballi</i> Obraztsov	1			2			
<i>Argyrotaenia klotzi</i> Obraztsov	1		1				1(2/1)
<i>Argyrotaenia lautana</i> Powell	1		1	3	1		
<i>Argyrotaenia ljungiana</i> (Thunberg)			2	3			
<i>Argyrotaenia mariana</i> (Fernald)	1			4	1		
<i>Argyrotaenia martini</i> Powell	1		1	2	2		
<i>Argyrotaenia montezumae</i> (Walsingham)	1		1	3	1		
<i>Argyrotaenia niscana</i> (Kearfott)	1	1	1	2	1		
<i>Argyrotaenia occultana</i> Freeman	1			3			
<i>Argyrotaenia paiuteana</i> Powell	1			5			
<i>Argyrotaenia pinatubana</i> (Kearfott)	1		1	1			3(3/1)
<i>Argyrotaenia pomililiana</i> Trematerra & Brown	1	3					
<i>Argyrotaenia provana</i> (Kearfott)	1			3	2		
<i>Argyrotaenia quadrifasciana</i> (Fernald)	1		1	4			
<i>Argyrotaenia quercifoliana</i> (Fitch)	1	1	1	3			
<i>Argyrotaenia repertana</i> Freeman	1			3	1		
<i>Argyrotaenia sphaleropa</i> (Meyrick)	1	1	2	3			
<i>Argyrotaenia tabulana</i> Freeman	1			5			
<i>Argyrotaenia tristriata</i> (Meyrick)	1			1			
<i>Argyrotaenia tucumana</i> Trematerra & Brown	1						1(3/1)
<i>Argyrotaenia unda</i> Brown & Cramer		2		1			
<i>Argyrotaenia velutinana</i> (Walker)	1	1		3	1		
<i>Ascerodes prochlora</i> Meyrick	1			1			
<i>Avaria hyerana</i> (Milliere)	1			3			
<i>Cacoecimorpha pronubana</i> (Hübner)	1			5			
<i>Capua changi</i> Kawabe	1		2	3			
<i>Capua chloraspis</i> Meyrick				1			
<i>Capua thelmae</i> Diakonoff							1(3/1)
<i>Capua vulgana</i> (Frölich)	1		2	3			
<i>Catamacta gavisana</i> (Walker)	1		1	1			
<i>Catamacta lotinana</i> (Meyrick)	1		1				
<i>Chiraps alloica</i> (Diakonoff)	1	1		2		1	1(3/1)
<i>Choristoneura adumbratanus</i> (Walsingham)	1			1	1	3	
<i>Choristoneura albaniana</i> (Walker)	1		1	1			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Choristoneura argentifasciata</i> Heppner	1	2	2	1			
<i>Choristoneura conflictana</i> (Walker)	1				1	4	
<i>Choristoneura diversana</i> (Hübner)	1		1	2	2		
<i>Choristoneura fractivittana</i> (Clemens)	1			3	2		
<i>Choristoneura fumiferana</i> (Clemens)	1			1	3	1	
<i>Choristoneura hebenstreitella</i> (Müller)	1				5		
<i>Choristoneura lafauryana</i> (Ragonot)	1		1	4			
<i>Choristoneura longicellana</i> (Walsingham)	1		1	2		2	
<i>Choristoneura obsoletana</i> (Walker)	1			4		1	
<i>Choristoneura parallela</i> (Robinson)	1			2	2		
<i>Choristoneura rosaceana</i> (Harris)	1			3	2		
<i>Choristoneura simonyi</i> (Rebel)	1		1				
<i>Choristoneura zapulata</i> (Robinson)	1			1	1		
<i>Clepsiphyes pigra</i> (Meyrick)	1						1(2/1)
<i>Clepsis abcisana</i> (Zeller)	1						2(2/1)
<i>Clepsis aerosana</i> (Lederer)	1		1				
<i>Clepsis anderslaneyii</i> Dombroskie & Brown	1			3	2		
<i>Clepsis aliana</i> Kawabe	1	1					
<i>Clepsis canariensis</i> (Rebel)		1					
<i>Clepsis clemensiana</i> (Fernald)	1		1	3	1		
<i>Clepsis consimilana</i> (Hübner)	1	1		1			3(2/1)
<i>Clepsis dumicolana</i> (Zeller)	1		1	3	1		
<i>Clepsis ecclisis</i> (Walsingham)				4			
<i>Clepsis flavidana</i> (McDunnough)	1				1	1	
<i>Clepsis fucana</i> (Walsingham)	1			1	2		
<i>Clepsis gelophodes</i> (Meyrick)				5			
<i>Clepsis hohuanshanensis</i> Kawabe	1				1		
<i>Clepsis insignata</i> Oku	1			3			
<i>Clepsis leptograpta</i> (Meyrick)	1			2			
<i>Clepsis lindebergi</i> (Krogerus)	1			1			
<i>Clepsis listerana</i> (Kearfott)				2			
<i>Clepsis melaleucanus</i> (Walker)	1		1	2	1		1(2/4)
<i>Clepsis metalleta</i> (Walsingham)	1				2		
<i>Clepsis moeschleriana</i> (Wocke)	1		1	1			
<i>Clepsis monticolana</i> Kawabe	1		2	2			1(2/1)
<i>Clepsis neglectana</i> (Herrich-Schäffer)	1	1					1(2/1)
<i>Clepsis peritana</i> (Clemens)	1			5			
<i>Clepsis persicana</i> (Fitch)	1		1	3	1		
<i>Clepsis provocata</i> (Meyrick)	1			4		1	
<i>Clepsis rogana</i> (Guenée)	1		4	1			
<i>Clepsis rolandriana</i> (Linnaeus)	1					1	
<i>Clepsis rurinana</i> (Linnaeus)	1			6			
<i>Clepsis sarthana</i> (Ragonot)				1			
<i>Clepsis senecionana</i> (Hübner)	1		3				
<i>Clepsis spectrana</i> (Treitschke)	1			3		2	
<i>Clepsis steineriana</i> (Hübner)	1			2		1	
<i>Clepsis subcostana</i> (Stainton)	1			2			
<i>Clepsis unicolorana</i> (Duponchel)	1			4	1		
<i>Clepsis virescana</i> (Clemens)	1		1	4			
<i>Clepsis vitiana</i> (Zeller)	1			1			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Cryptoptila australana</i> (Levin)	1			4			
<i>Ctenopseustis obliquana</i> (Walker)	1			3			
<i>Cudonigera houstonana</i> (Grote)	1			2		1	1(4/2), 1 (2/5)
<i>Cuspidata leptozona</i> Diakonoff				1			
<i>Cuspidata oligosperma</i> Diakonoff				1			
<i>Dentisociaria armata</i> Kuznetsov				3	1	1	
<i>Dicaticinta diticinctana</i> (Walsingham)	1	1		2	2		
<i>Dicellitits nigracula</i> Meyrick	1			1			
<i>Dichelia histrionana</i> (Frölich)	1		1	3	1		
<i>Dichelopa amorphia</i> Clarke	1			5			
<i>Dichelopa argema</i> Clarke				5			
<i>Dichelopa argosphenia</i> Meyrick	1			5			
<i>Dichelopa canitia</i> Clarke				4			
<i>Dichelopa castanopsis</i> Meyrick	1			1			
<i>Dichelopa ceramocausta</i> Meyrick	1			5			
<i>Dichelopa cholerae</i> Meyrick	1	1		4			
<i>Dichelopa cirrhodora</i> Meyrick			1				
<i>Dichelopa deltozancla</i> Meyrick			2	3			
<i>Dichelopa dendrophila</i> Clarke	1			5			
<i>Dichelopa exulcerata</i> Meyrick	1	1		4			
<i>Dichelopa harmodes</i> Meyrick	1		3	2			
<i>Dichelopa honoranda</i> Meyrick	1			1			
<i>Dichelopa lupicinia</i> Clarke	1			5			
<i>Dichelopa meligma</i> Clarke	1			1			
<i>Dichelopa messalina</i> Clarke			2	2	1		
<i>Dichelopa myopori</i> Clarke	1*		1	4			
<i>Dichelopa orthiostyla</i> Meyrick				1			
<i>Dichelopa pachymeta</i> Meyrick			1				
<i>Dichelopa panoplana</i> Meyrick	1		2				
<i>Dichelopa phalaranthes</i> Meyrick	1	1		3			
<i>Dichelopa platyxantha</i> Clarke				4	1		
<i>Dichelopa praestrigata</i> Meyrick	1			1			
<i>Dichelopa pulcheria</i> Clarke				1			
<i>Dichelopa sericopsis</i> Meyrick	1			5			
<i>Dichelopa vaccinii</i> Clarke	1		1	4			
<i>Diedra calocedrana</i> Rubinoff & Powell				3			
<i>Diedra cockerellana</i> (Kearfott)	1			4			
<i>Diedra intermontana</i> Rubinoff & Powell	1			5			
<i>Diedra wielgusi</i> (Clarke)	1			3		2	
<i>Digitosa leptographa</i> Diakonoff				1			
<i>Diplocalyptis congruentana</i> (Kennel)	1			3	2		
<i>Diplocalyptis nigricana</i> (Yasuda)	1			1			
<i>Diplocalyptis operosa</i> (Meyrick)	1			1			
<i>Ditula angustiorana</i> (Haworth)	1			3	2		
" <i>Durangarchips</i> " <i>druana</i> (Walsingham)	1			3			
<i>Epagoge grotiana</i> (Fabricius)	1		1	4			
<i>Epalxiphora axenana</i> Meyrick				2			
<i>Epichorista zatrophana</i> (Meyrick)					1		
<i>Epichoristodes leucocymba</i> (Meyrick)	1			2			
<i>Epiphyas ashworthana</i> (Newman)	1				2		

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Epiphyas postvittana</i> (Walker)	1	1		4			
<i>Ericodesma concordana</i> (Meyrick)	1			4			
<i>Ericodesma indigestana</i> (Meyrick)	1			1			
<i>Gelophaula siraea</i> (Meyrick)	1			1			
<i>Geogepa malacotorna</i> (Meyrick)	1		1				
<i>Geogepa nigropunctata</i> Kawabe	1			3	1		
<i>Geogepa pedaliota</i> (Meyrick)				5			
<i>Geogepa promiscua</i> Razowski	1		2	3	1		
<i>Geogepa stenocorda</i> (Diakonoff)	1				4	1	
<i>Gnorismoneura exulis</i> Issiki & Stringer	1			3	2		
<i>Gnorismoneura hoshinoi</i> (Kawabe)	1			4			
<i>Gnorismoneura mesotoma</i> (Yasuda)	1		1	3	1		
<i>Gnorismoneura stereomorpha</i> (Meyrick)				1			
<i>Gnorismoneura vallifica</i> (Meyrick)	1		1	1	2		
<i>Goniotorna erratica</i> (Diakonoff)	1			1			
<i>Goniotorna verticillata</i> Diakonoff	1			1			
<i>Harmologa amplexana</i> (Zeller)	1			4			
<i>Harmologa petrias</i> Meyrick	1				1		
<i>Harmologa sisyrana</i> Meyrick	1			2			
<i>Homona aestivana</i> (Walker)	1			1			
<i>Homona bakeri</i> Diakonoff	1			2			
<i>Homona bicornis</i> Diakonoff	1	2		3			
<i>Homona coffearia</i> (Nietner)	1		1	2		2	
<i>Homona encausta</i> (Meyrick)	1			1			
<i>Homona issikii</i> Yasuda	1		2	3			
<i>Homona magnanima</i> Diakonoff	1			2	2	1	
<i>Homona mermerodes</i> Meyrick	1			3			
<i>Homona polyarcha</i> Meyrick	1		1				
<i>Homona salaconis</i> (Meyrick)	1		2	3			
<i>Homona spargotis</i> Meyrick	1			1			
<i>Homona tabescens</i> (Meyrick)	1			1			
<i>Homona trachyptera</i> Diakonoff		1			1		
<i>Homonopsis foederatana</i> (Kennel)	1		1	4			
<i>Homonopsis illotana</i> (Kennel)	1			4			
<i>Idolatteria orgias</i> (Meyrick)						1	
<i>Idolatteria simulartix</i> Walsingham					1		
<i>Isochorista panaeolana</i> Meyrick	1			1	1		
<i>Isochorista ranulana</i> Meyrick	1		1	1			
<i>Isodemis serpentinana</i> (Walker)	1			5			
<i>Isotenes inae</i> Diakonoff	1		1	3	1		
<i>Isotenes mesonephela</i> Diakonoff			1	1			
<i>Isotenes miserana</i> (Walker)	1		2	3			
<i>Isotenes thaumasia</i> Diakonoff	1			1			
<i>Labiosa ochrostoma</i> (Meyrick)	1			1			
<i>Leontochroma suppurpuratum</i> Walsingham	1				1	3	
<i>Lozotaenia coniferana</i> (Issiki)	1				3	2	
<i>Lozotaenia costinotana</i> Franclemont				1			
<i>Lozotaenia cupidinana</i> (Staudinger)	1				1		
<i>Lozotaenia exomilana</i> Franclemont	1			1			
<i>Lozotaenia forsterana</i> (Fabricius)	1			2	2		1(5/5)

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Lozotaenia kumatai</i> Oku	1			1	2		
<i>Lozotaenia rindgei</i> Obraztsov	1			1			
<i>Lozotaeniodes cupressana</i> (Duponchel)	1	1	1	1	2		
<i>Lozotaeniodes formosana</i> (Frölich)	1				1		
<i>Lumaria probolias</i> (Meyrick)	1			2			
<i>Meridemis bathymorpha</i> Diakonoff	1			4	1		
<i>Meridemis detractana</i> (Walker)	1		2	3			
<i>Merophyas divulsana</i> (Walker)	1			3	1		
<i>Merophyas leucaniana</i> (Walker)	1			2	1		
<i>Metamesia episema</i> Diakonoff	1		1	1			
<i>Minutargyrotoza calvicaput</i> (Walsingham)	1			1	1		
<i>Minutargyrotoza minuta</i> (Walsingham)	1			2			
<i>Neocalyptis affinisana</i> (Walker)	1		3	2			
<i>Neocalyptis angustilineata</i> (Walsingham)	1		3	2			
<i>Neocalyptis lirata</i> (Christoph)	1		1	9			
<i>Pandemis caryocentra</i> Diakonoff	1			1			
<i>Pandemis cerasana</i> (Hübner)	1		1	4	1		
<i>Pandemis chlorograptia</i> Meyrick	1			1			
<i>Pandemis chondrillana</i> (Herrich-Schäffer)	1			2			
<i>Pandemis cinnamomeana</i> (Treitschke)	1			5			
<i>Pandemis corylana</i> (Fabricius)	1		1	3	1		
<i>Pandemis dryoxesta</i> Meyrick	1			1			
<i>Pandemis dumetana</i> (Treitschke)				4	1		
<i>Pandemis heparana</i> (Denis & Schiffermüller)	1		1	4			
<i>Pandemis inouei</i> Kawabe	1			1		1	
<i>Pandemis lamprosana</i> (Robinson)	1			3		2	
<i>Pandemis limitata</i> (Robinson)	1			2	1	2	
<i>Pandemis pyrusana</i> Kearfott	1			4		1	
<i>Pandemis regalis</i> (Diakonoff)				1			
<i>Paradichelia</i> sp. (Papua New Guinea)	1			1			
<i>Paramesia gnomana</i> (Clerck)	1		1	4			
<i>Pararrhaptica fuscoviridis</i> (Swezey)				1			
<i>Periclepsis cinctana</i> (Denis & Schiffermüller)	1			5			
<i>Philedone gerningana</i> (Denis & Schiffermüller)	1	2		3			
<i>Philedonides lunana</i> (Thunberg & Borgström)	1			5			
<i>Philedonides rhombicana</i> (Herrich-Schäffer)	1		1				
<i>Planostocha clavigera</i> (Diakonoff)					1		
<i>Planostocha cumulata</i> (Meyrick)	1			4			
<i>Planotortrix excessana</i> (Walker)	1			2	2	1	
<i>Pseudargyrotoza aeratana</i> (Kennel)	1		1	3	1		
<i>Pseudargyrotoza conwagana</i> (Fabricius)	1	1	2	2			
<i>Pseudeulia asinana</i> (Hübner)	1		2	3			
<i>Pternozyga haeretica</i> Meyrick				1			
<i>Ptycholoma imitator</i> (Walsingham)	1		1	2	1		1(2/4)
<i>Ptycholoma lecheana</i> (Linnaeus)	1			2	2		1(4/1)
<i>Ptycholomoides aeriferanus</i> (Herrich-Schäffer)	1			1	1	2	1(3/5)
<i>Spheterista reynoldsiana</i> (Swezey)	1			2			
<i>Spheterista variabilis</i> (Walsingham)	1	1					
<i>Sychnochlaena megalorhis</i> Diakonoff				1			
<i>Syndemis afflictana</i> (Walker)	1			3	2		

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Syndemis musculana</i> (Hübner)	1			1	3	1	
<i>Terricula violentana</i> (Kawabe)	1		2	3			
<i>Terthreutes bulligera</i> Meyrick	1			1			
<i>Terthreutes sphaerocosma</i> Meyrick	1	1		2			
<i>Thrinophora lignigerana</i> (Walker)				1			
<i>Tosirips perpulchrana</i> (Kennel)	1			1			
<i>Ulodemis trigrapha</i> Meyrick	1			5			
<i>Vialonga polyantha</i> Diakonoff				1			
<i>Williella sauteri</i> Horak	1		1		1		
<i>Williella</i> sp. (New Caledonia)	1		2	3			
<i>Xenotemna pallorana</i> (Robinson)	1	1			3	1	
<i>Zacorisca basilica</i> Diakonoff				1			
<i>Zacorisca electrina</i> (Meyrick)		1		2		2	
<i>Zacorisca heliaula</i> (Meyrick)	1			1			
<i>Zacorisca holantha</i> Meyrick	1		1	4			
<i>Zacorisca phaeoxesta</i> Meyrick				1			
<i>Zacorisca taminia</i> (Felder & Rogenhofer)				1			
<i>Zacorisca tetrachroma</i> Diakonoff				1			
<i>Zacorisca thiasodes</i> (Meyrick)					1		
<i>Zacorisca toxopei</i> Diakonoff	1			2			
CERACINI							
<i>Cerace myriopa</i> Meyrick					1	2	
<i>Cerace onustana</i> Walker							2 (5/5)
<i>Cerace sardias</i> Meyrick	1			1		1	
<i>Cerace stipatana</i> Walker	1				1	1	1 (4/2), 2(6/8) 1(3/5), 1(6/5)
<i>Cerace tetraonis</i> Butler	1				1		
<i>Cerace xanthocosma</i> Diakonoff					1	4	
<i>Eurydoxa advena</i> Filipjev	1				3	1	1(5/4)
<i>Pentacitrotus tetrakore</i> (Wileman & Stringer)	1					1	1(6/3)
EPITYMBIINI							
<i>Aelostoma scutiferana</i> (Meyrick)	1			1			
<i>Anisogona simana</i> (Meyrick)	1			3			
<i>Epitymbia ososcelana</i> (Meyrick)	1			2			
<i>Mimeoclysia piridana</i> Diakonoff	1			1			
<i>Rhomboceros homogama</i> (Meyrick)				1			
<i>Sperchia intractana</i> (Walker)	1			3			
" <i>Tortrix</i> " <i>amaenana</i> Walker	1		1				
" <i>Tortrix</i> " <i>subfurcatana</i> Walker	1			1			
" <i>Epitymbiini</i> " <i>decolorana</i> Walker	1			2			
" <i>Epitymbiini</i> " <i>fuscicepsana</i> Walker	1			3			
" <i>Epitymbiini</i> " <i>vacuana</i> Walker	1			5			
AROTROPHORA GROUP							
<i>Arotrophora arcuatalis</i> (Walker)	1			1			
<i>Arotrophora crustata</i> Meyrick				1			
" <i>Cnephasia</i> " <i>jactatana</i> Walker	1			5			
<i>Drachmobola periastra</i> Meyrick	1			1			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Parastranga macrogona</i> Meyrick				1			
<i>Peraglyphis lividana</i> (Meyrick)				1			
<i>Protopterna chlybias</i> Meyrick	1			1			
<i>Taeniarchis periorma</i> (Meyrick)	1			1			
" <i>Teras</i> " <i>incessana</i> Walker	1			1			
SPARGANOTHINI							
<i>Amorbia cacao</i> Phillips & Powell	1			1			
<i>Amorbia chlorolyca</i> Meyrick	1			5			
<i>Amorbia concavana</i> (Zeller)	1			2			
<i>Amorbia cuneana</i> (Walsingham)	1			1	3	1	
<i>Amorbia curitiba</i> Phillips & Powell	1				1		
<i>Amorbia depicta</i> Walsingham	1		1	3	1		
<i>Amorbia eccopta</i> Walsingham	1			4	1		
<i>Amorbia effoetana</i> (Moschler)					1		
<i>Amorbia emigratella</i> Busck	1			4	1		
<i>Amorbia exsectana</i> (Zeller)				1			
<i>Amorbia exustana</i> (Zeller)	1			1			
<i>Amorbia helioxantha</i> Meyrick				1			
<i>Amorbia humerosana</i> Clemens	1			4	1		
<i>Amorbia knudsoni</i> Phillips & Powell	1			1			
<i>Amorbia laterculana</i> (Zeller)	1		1	4			
<i>Amorbia leptophracta</i> (Meyrick)		1	1	3			
<i>Amorbia monteverde</i> Phillips & Powell	1			3			
<i>Amorbia nuptana</i> (Felder & Rogenhoffer)	1		1	4			
<i>Amorbia osmotris</i> Meyrick	1			4	1		
<i>Amorbia rectangularis</i> Meyrick	1			5			
<i>Amorbia rectilineana</i> (Zeller)				2			
<i>Amorbia rhombobasis</i> Phillips & Powell	1			5			
<i>Amorbia santamaria</i> Phillips & Powell	1			5			
<i>Amorbia synneurana</i> Barnes & Busck	1			5			
<i>Amorbia</i> n. sp. (Florida)	1			1			
<i>Coelostathma binotata</i> Walsingham	1		1	1			
<i>Coelostathma discopunctana</i> Clemens	1			5			
<i>Coelostathma</i> n. sp. (Florida)	1		2	3			
" <i>Coelostathma</i> " <i>continua</i> Landry	1			1			
<i>Lambertiodes harmonia</i> (Meyrick)	1			1			
<i>Niasoma metallicana</i> (Walsingham)	1			5			
<i>Platynota exasperatana</i> (Zeller)	1			4	1		
<i>Platynota flavedana</i> Clemens	1	1	1	3			
<i>Platynota idaeusalis</i> (Walker)	1			5			
<i>Platynota labiosana</i> (Zeller)	1			3		2	
<i>Platynota nigrocervina</i> Walsingham	1			4	1		
<i>Platynota rostrana</i> (Walker)	1			4	1		
<i>Platynota semiustana</i> Walsingham	1			4	1		
<i>Platynota stultana</i> Walsingham	1			3	2		
<i>Platynota subargentea</i> Walsingham	1			5			
<i>Platynota</i> n. sp. (Texas)				1			
<i>Platynota viridana</i> Barnes & Busck	1			5			
<i>Platynota wenzelana</i> (Haimbach)	1		1	4			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Platynota xylophaea</i> (Meyrick)	1			1			
<i>Sparganopseustis</i> sp. (Costa Rica)				5			
<i>Sparganothina neoamoebaea</i> Landry				1			
<i>Sparganothina xanthista</i> (Walsingham)				1			
" <i>Sparganothina</i> " <i>laselvana</i> Landry			1	1			
" <i>Sparganothina</i> " <i>nephela</i> (Walsingham)	1			1			
" <i>Sparganothina</i> " <i>venezolana</i> Landry				1			
<i>Sparganothis albicaudana</i> Busck	1			5			
<i>Sparganothis bistrata</i> Kearfott	1		1	2	2		
<i>Sparganothis cana</i> (Robinson)	1			4	1		
<i>Sparganothis caryae</i> (Robinson)	1			5			
<i>Sparganothis chambersana</i> (Kearfott)	1		2	3			
<i>Sparganothis demissana</i> (Walsingham)	1			4		1	
<i>Sparganothis diluticostana</i> (Walsingham)	1			5			
<i>Sparganothis directana</i> (Walker)	1		2	3			
<i>Sparganothis distincta</i> (Walsingham)	1		1	2	2		
<i>Sparganothis</i> n. sp. (New Jersey)	1			3			1 (4/2)
<i>Sparganothis flavibasana</i> (Fernald)	1		1	2	2		
<i>Sparganothis illustris</i> Razowski	1			1			
<i>Sparganothis karacana</i> (Kearfott)	1			5			
<i>Sparganothis lamberti</i> Franclemont	1			5			
<i>Sparganothis lycopodiana</i> (Kearfott)	1		2	3			
<i>Sparganothis matsudai</i> Yasuda	1			3			
<i>Sparganothis niveana</i> (Walsingham)	1			5			
<i>Sparganothis pettitana</i> (Robinson)	1			5			
<i>Sparganothis pilleriana</i> (Denis & Schiffermüller)	1		1	4			
<i>Sparganothis praecana</i> (Kennel)	1		1	1			
<i>Sparganothis pulcherrimana</i> (Walsingham)	1		2	3			
<i>Sparganothis reticulatana</i> (Clemens)	1			5			
<i>Sparganothis</i> n. sp. (Texas)				4	1		
<i>Sparganothis saracana</i> (Kearfott)	1			3	1	1	
<i>Sparganothis senecionana</i> (Walsingham)	1			4	1		
<i>Sparganothis striata</i> (Walsingham)	1		1	1	2	1	
<i>Sparganothis sulfureana</i> (Clemens)	1			5			
<i>Sparganothis</i> n. sp. (Alabama)	1		1				
<i>Sparganothis tristriata</i> Kearfott	1		1	3	1		
<i>Sparganothis tunicana</i> (Walsingham)	1	1		3	1		
<i>Sparganothis umbrana</i> Barnes & Busck	1		1	2	1	1	
<i>Sparganothis unifasciana</i> (Clemens)	1			5			
<i>Sparganothis violaceana</i> (Robinson)	1			3			
<i>Sparganothis vocaridorsana</i> Kearfott	1			1	1		
<i>Sparganothis xanthoides</i> (Walker)	1		2	2		1	
<i>Sparganothoides calthograpta</i> Kruse & Powell	1			2		1	
<i>Sparganothoides capitornata</i> Kruse & Powell	1	1		2			
<i>Sparganothoides coloratana</i> Kruse & Powell				1			
<i>Sparganothoides cornutana</i> Kruse & Powell	1		2	2			
<i>Sparganothoides hydeana</i> (Klots)	1			4	1		
<i>Sparganothoides lentiginosana</i> (Walsingham)	1			5			
<i>Sparganothoides licrosana</i> Kruse & Powell				1			
<i>Sparganothoides machimiana</i> (Barnes & Busck)	1			5			

Appendix 1. Continued.

Taxa	♂ w/1	♀ w/2	w/2&3	w/3	w/3&4	w/4	w/other
<i>Sparganothoides ocrisana</i> Kruse & Powell	1			1			
<i>Synalocha gutierrezia</i> Powell	1			1			
<i>Synnoma lynosyrana</i> Walsingham	1	1	1	3			
ATTERIINI							
<i>Anacrusis ruptimacula</i> (Dognin)				1			
<i>Anacrusis stapiana</i> (Felder & Rogenhoffer)	1			4	1		
<i>Archipimima flexicostalis</i> (Dognin)	1			1			
<i>Archipimima labyrinthopa</i> (Meyrick)				1			
<i>Atteria pavimentata</i> Meyrick					1		
“ <i>Cupua</i> ” <i>tylonota</i> Meyrick	1			5			
<i>Templemania animosana</i> (Busck)				1			
<i>Templemania millistriata</i> (Walsingham)	1			4	1		
<i>Templemania sarothrura</i> (Felder & Rogenhoffer)	1			4	1		
<i>Tina audaculana</i> (Busck)	1			1			
<i>Tinacrusis apertana</i> (Walsingham)	1			1			
<i>Tinacrusis aquila</i> (Busck)	1			2	1	1	
<i>Tinacrusis patulana</i> (Walker)				5			